THE OIL AND GAS JOURNAL

Volume 32
Number 34

January 11, 1934

Subscription rates: 1 year, $6 (Canada and foreign, $7); 6 months, $3; 3 months, $2; current copies, 15 cents (extra copies of special numbers, 50 cents)

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SEE OUR DESCRIPTIONS IN THE COMPOSITE CATALOG

East Texas Producers Say Demand Now Exceeds Allowable and They Will Seek an Increase

By JAMES McINTYRE

SOME East Texas oil producers are back of a movement seeking to obtain an increase in the allowable production of that big field. They claim the supply does not meet the demand and that oil is being withdrawn from storage. They also declare the quantity of "hot" oil going out has been decreased since Federal Judge Bryant issued an injunction against several producers and refiners.

The Long Lake area in southwestern Anderson County, East Central Texas, was defined on the west and southwest by dry holes. Only one small well has been finished in that area, which was once looked upon as having great possibilities for production. However, the chances are by no means exhausted, as the north and northeast may develop the expected big pay.

The northern limits of the Greta Field in Refugio County, Texas, were defined by a dry hole, No. 1 Welder on the James T. McGrew survey. In the same week the lower end of the field was extended a quarter mile southeasterly.

The wildcat test at Tarkington Prairie, Liberty County, Texas, mentioned last week, was shut in after it tested 1,300 bbls. of oil in 24 hours. The oil is 40 degrees in gravity, corrected. The Gulf Production Company owns most of the acreage close to the well, and the pool will be developed along conservative lines, with wells 933 feet apart.

In Michigan the gas pool in Broomfield Township, Isabella County, was extended and three oil wells were completed in Porter Township and in Greendale Township, all in Midland County. The wells averaged 400 bbls. initial production.

An interesting development in California was the completion of a 12,000 bbl. well in the Kettleman North Dome Field, together with two wells averaging around 4,000 bbls. each.

In Oklahoma the John Fitts Pool, in Southern Pontotoc County, and the area south of the famous old Burbank Field in Osage County, are engaging more interest than any other part of the state. It is likely that at the next auction sale of Osage leases there will be lively bidding for anything the Interior Department may put up that lies close to the recently drilled good wells in the area, although there is some dissatisfaction at the tightening of regulations for the development of leases on Indian owned lands. The John Fitts Pool is slowed up by reason of its remoteness from markets.

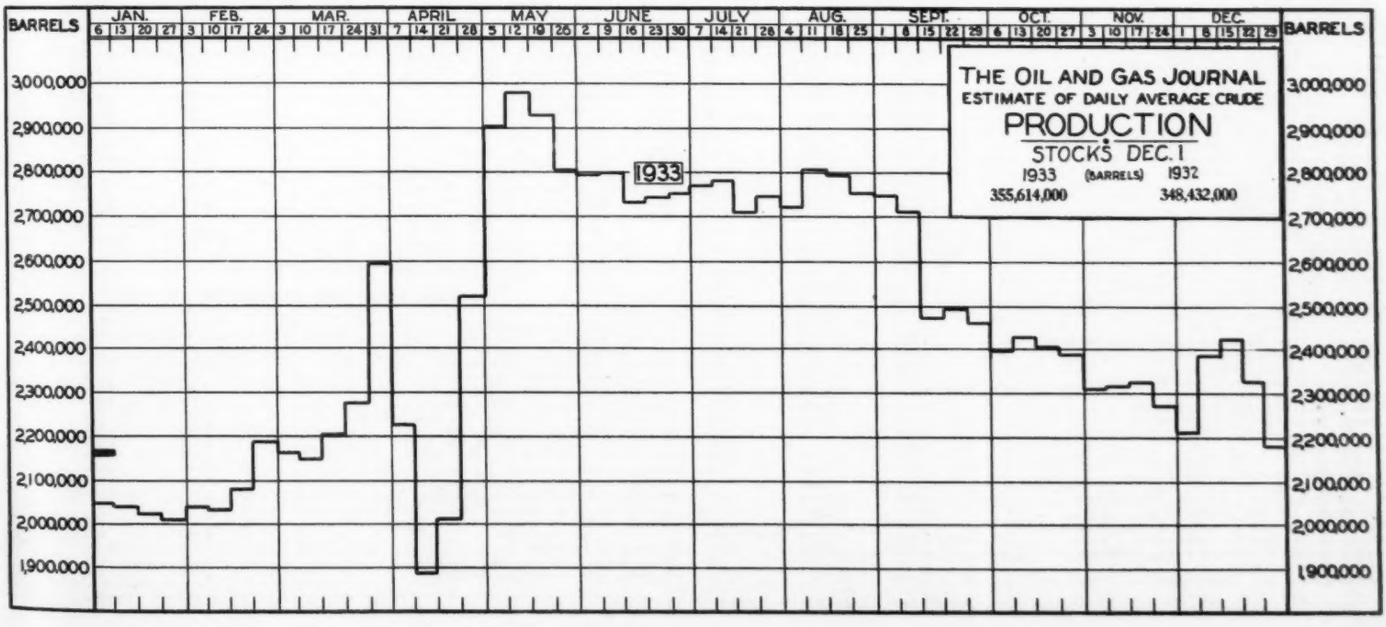
The 250-barrel well completed in the old Washington County Field in Pennsylvania was still making around 200 bbls. a day, a week after its completion, thus proving it was not a flashy producer. In Doddridge County, West Virginia, a 4,000,000-foot gasser was the best producer reported from the Eastern Fields in the past week.

Crude Oil Production in the United States

Estimated daily average production for the week ending January 6, and a comparison with previous week and one year ago, follows:

	Jan. 6	Dec. 30	Jan. 7, 1933
Oklahoma—			
Oklahoma City	96,710	111,610	94,215
Seminole-St. Louis	74,830	80,360	110,920
Remainder of State	206,220	203,480	194,405
Total Oklahoma	377,760	395,450	399,540
East Texas—			
Lathrop	172,535	181,565	118,325
Kilgore	125,408	132,740	85,432
Joiner	111,881	117,985	96,115
Total East Texas	409,824	432,290	299,872
West Texas	119,537	120,154	156,037
North Central Texas	82,035	80,943	72,045
Texas Panhandle	41,787	41,450	42,452
East Central Texas	43,567	42,125	49,228
Gulf Coast—Texas	165,035	158,437	127,062
Southwest Texas	44,903	42,461	57,195
Total State of Texas	906,688	917,860	803,891
Kansas	113,340	109,855	88,935
North Louisiana	26,210	26,195	29,210
Gulf Coast—Louisiana	43,512	44,876	34,735
Arkansas	32,180	32,290	32,245
Eastern Fields	125,500	123,000	116,000
Rocky Mountain area	80,410	78,850	66,311
California—			
Santa Fe Springs	40,175	40,150	55,250
Long Beach	57,750	57,000	68,500
Playa Del Rey	6,350	9,200	13,000
Elwood	12,600	12,850	13,250
Kettleman Hills	56,500	50,450	59,500
Remainder of State	286,625	276,350	259,000
Total California	460,000	446,000	468,000
Total United States	2,165,600	2,174,376	2,039,367

Decrease 8,776 Bbls. Daily.



January Schedules of Mid-Continent Crude Runs to Refineries Continue to Show Increases

By T. F. SMILEY

Daily average crude runs to stills scheduled for January by refiners in the Mid-Continent territory total 448,360 bbls., as compared with 399,405 bbls. scheduled for the same month last year and with 434,275 bbls. in December, 1933. This represents an estimated daily increase in refinery runs of 14,085 bbls. or 3.22 per cent over those of last month and 48,955 bbls. or 12.2 per cent over those of a year ago. The only district which shows a decrease is the West Texas and Panhandle, where 50,200 bbls. for the current month compares with 43,890 bbls. in the preceding month, a drop of 6,310 bbls. This same district happens to be the only one which showed an increase in December when all the others registered curtailed runs.

Growing stocks of gasoline explain in part the failure of expected higher prices to materialize, and any substantial increase in refinery runs would seem likely to aggravate a condition that calls for limitation of output, not extension. It is pointed out, however, that an indicated increase in the consumption of motor fuel will neutralize appreciably the effect of the estimated 3.22 per cent rise in refinery runs. Gasoline consumption in 1933, according to figures in hand, was about 2 per cent over that of 1932, and the gain was particularly noticeable in the last two months of the year. Furthermore, there is excellent evidence that Mid-Continent refiners are keeping their production of gasoline within the limits which Secretary Ickes, as oil administrator, fixed for January. In addition to this, it is to be borne in mind that while the January schedules show an increase over December, the schedules for the three months immediately preceding this had shown, beginning with September, a decline from the month before. In Oklahoma gasoline inspected for taxation during November, 1933, totaled 22,499,794 gallons, compared with 21,084,394 gallons in November, 1932, a gain of 1,415,400 gallons. Taxes were paid on this gasoline in December.

Mid-Continent Refinery Operations

Average Daily Crude Runs (Barrels)

(Based on estimates compiled first of each month by The Oil and Gas Journal)

	1929	1930	1931	1932	1933	1934
January	508,550	535,460	478,795	405,910	399,405	448,360
February	506,800	519,355	470,125	411,280	407,125	.....
March	514,950	531,500	449,634	401,155	423,445	.....
April	530,530	555,250	497,391	419,750	441,000	.....
May	577,500	574,300	510,540	436,160	470,460	.....
June	583,030	572,250	567,915	440,765	479,987	.....
July	565,800	548,475	588,840	433,255	525,845	.....
August	555,250	526,400	590,545	427,710	518,510	.....
September	552,300	498,710	588,105	430,430	526,749	.....
October	544,720	518,800	472,190	401,995	495,756	.....
November	545,473	506,700	480,440	408,180	481,335	.....
December	540,630	478,360	456,525	416,275	434,275	.....

Operations by Refinery Districts

	Jan. 1 dy. crude capacity	January dy. crude runs	December dy. crude runs	January daily increase
Arkansas	37,550	20,200	20,000	200
East Texas	176,700	71,570	66,190	5,380
Kansas	182,700	92,700	90,700	2,000
North Central Texas	100,450	38,560	36,410	2,150
North Louisiana	41,750	27,900	24,400	3,500
Oklahoma	297,500	140,985	135,375	5,610
Southwest Texas	32,100	12,555	11,000	1,555
West Texas and Panhandle	101,975	43,890	50,200	*6,310
Total Mid-Continent	970,725	448,360	434,275	20,395

*Decrease.

Oklahoma Shows Biggest Increase

Oklahoma's runs to stills this month, as indicated by the schedules of the various Mid-Continent refiners, will show the greatest increase over those of the preceding month, a rise of 5,610 bbls. being indicated. Many refiners lowered their schedules and Barnsdall Refineries, Inc., shut down its Okmulgee plant, which ran about 1,500 bbls. daily in December; but scattered increases, most of them moderate ones, along with several resumptions, overbalanced these reductions. The Marathon Oil Co.'s Bristow plant, which had been closed, started up again, with 2,250 bbls. of crude scheduled to be processed daily. The plant of the Sterling Refining Co., Oklahoma City, which also had been closed, resumed operation the last week of December under the name of Government Refining Co., and its January schedule calls for 2,000 bbls. of crude daily.

East Texas was a close second, that district scheduling 71,570 bbls. daily as compared with 66,190 bbls. for December, a rise of 5,380 bbls. Most of the changes from the December refinery schedules were increases, although substantial curtailments were reported by some, and Humble's Chilton and Neches plants were among those shut down. Other plants which operated in December, but joined the closed group for January are the Texas Refining Co. No. 1, Kilgore; Gladewater Production Co., Gladewater; Taylor Refining Co., Tyler, and Trico Refining Co., Turnerstown. Danciger Refineries, Inc., which closed its Longview plant last November 15, remains down. This concern is said to have declared its inability to make any profit out of crude oil bought at $1 a barrel and to have decided upon suspension of operation until the price of gasoline should bear a closer relationship to the price paid for crude. Added to the active list for January in the East Texas district are the Owl Refining Co., Arp, with daily runs of 1,000 bbls. scheduled, and the Sandy Refining Co., Big Sandy, 400 bbls.

Record of Increases Unbroken

The refinery schedules for January maintain unbroken a record which began last March of increases each month over the corresponding month of the year before. The peak was reached in July, when

(Continued on Page 38)

OKLAHOMA

Company and location—	Daily capacity	Aver. daily runs Jan.	Aver. daily runs Dec
Anderson-Prichard Oil Corp., Cyril	6,000	4,000	4,000
Altitude Petroleum Corp. (J. H. Peacock Refining Co.), Oklahoma City	3,000	300	500
Associated Petroleum Corp., Allen	8,000	(*)	(*)
Barnsdall Refineries, Inc., Barnsdall	6,000	3,000	3,000
Barnsdall Refineries, Inc., Okmulgee	10,000	(*)	1,500
Bell Oil & Gas Co., Grandfield	4,500	2,200	2,200
Black Gold Refining Co., Oklahoma City	2,500	1,200	850
Century Petroleum Corp., Oklahoma City	2,500	(*)	(*)
Champlin Refining Co., Enid	16,000	6,000	7,650
Columbia Oil Corp., Oklahoma City	3,500	(*)	(*)
Continental Oil Co., Ponca City	30,000	20,000	20,000
Crescent Refining Co., Holdenville	1,000	(*)	(*)
Cushing Refining & Gasoline Co., Blackwell	1,700	1,500	1,500
Cushing Refining & Gasoline Co., Cushing	4,500	2,500	2,150
Deep Rock Oil Corp., Cushing	10,000	9,000	9,000
Eason Oil Co., Enid	5,000	2,500	2,500
Empire Oil & Refining Co., Okmulgee	4,000	2,600	2,100
Empire Oil & Refining Co., Ponca City	12,000	6,500	5,800
Gem Refining Co., Oklahoma City	1,000	(*)	(*)
Globe Oil & Refining Co., Blackwell	7,500	6,000	6,000
Government Refining Co., No. 1, Oklahoma City	1,000	400	400
Government Refining Co., No. 2, Oklahoma City	3,500	2,000	(*)
Hanger Refining Co., Oklahoma City	1,000	250	150
Johnson Oil Refining Co., Cleveland	6,000	5,000	3,300
Major Petroleum Products Co., Oklahoma City	2,000	750	700
Mid-Continent Petroleum Corp., West Tulsa	40,000	18,000	19,000
Marathon Oil Co., Bristow	5,000	2,250	(*)
Oklahoma City Refining Co., Oklahoma City	2,500	(*)	(*)
Phillips Petroleum Co., Okmulgee	6,000	4,000	4,000
Producers Oil Co., Bristow	2,500	1,000	1,000
Producers & Refiners Corp., West Tulsa	6,000	3,000	3,000
Pure Oil Co., Muskogee	9,000	6,000	6,000
Rock Island Refining Co., Beckett	6,000	3,200	3,200
Sinclair Refining Co., Sand Springs	8,000	2,400	1,800
Sooner State Refining Co., Oklahoma City	300	85	(*)
Sun Oil Co., Yale	5,000	1,250	1,000
Sunray Oil Co. (C. E. Wright, receiver), Allen	7,000	2,300	2,400
Sunshine Refining Co., Seminole	1,000	300	200
Texas Co., West Tulsa	15,000	7,500	8,000
Texas Pacific Coal & Oil Co., Wynnewood	3,000	1,000	500
Tide Water Oil Co., Drumright	15,000	7,000	6,000
Triangle Producing & Refining Co., Oklahoma City	1,000	550	500
Wilcox Oil & Gas Co., Bristow	5,000	2,300	2,000
Wirt Franklin Petroleum Corp., Ardmore	4,000	2,000	2,500
Yale Oil Corp., Yale	2,000	350	275
York Refining Co., Oklahoma City	2,000	800	700
Total	297,500	140,985	135,375

*Shut down.

KANSAS

Company and location—	Daily capacity	Aver. daily runs Jan.	Aver. daily runs Dec.
Altitude Petroleum Corp., Chanute	5,000	(†)	(†)
Altitude Petroleum Corp., Kansas City, Mo.	3,000	300	600
Barnsdall Refineries, Inc., Wichita	4,000	2,000	2,000
Derby Oil Co., Wichita	8,000	3,500	3,500
Dickey Refining Co., McPherson	5,000	800	800
Eldorado Refining Co., Eldorado	4,500	3,000	2,700
Falcon Refining Co., Inc., Great Bend	700	400	400
Globe Oil & Refining Co., McPherson	10,000	7,200	7,200
Golden Rule Refining Co., Wichita	1,500	800	800
Kanotex Refining Co., Arkansas City	12,000	4,500	4,500
National Refining Co., Coffeyville	6,500	4,500	4,500
Phillips Petroleum Co., Kansas City	15,000	10,000	10,000
Shell Petroleum Corp., Arkansas City	22,000	12,000	12,000
Sinclair Refining Co., Coffeyville	12,000	7,500	7,500
Sinclair Refining Co., Argentine	9,500	4,500	4,500
Skelly Oil Co., Eldorado	23,000	12,500	11,000
Standard Oil Co. of Kansas, Neodesha	20,000	5,000	5,000
United Oil & Refining Co., Hutchinson	1,500	(*)	(*)
Vickers Petroleum Co., Potwin	3,500	2,200	2,200
White Eagle Refining Co., Augusta	16,000	12,000	11,500
Total	182,700	92,700	90,700

*Shut down. †Operating cracking unit, using gas oil.

WEST TEXAS AND PANHANDLE

Company and location—	Daily capacity	Aver. daily runs Jan.	Aver. daily runs Dec.
Active Oil Corp., Arno	1,500	(*)	(*)
Aero Refining Co., Pecos	225	10	...
Coltex Refining Co., Colorado	10,000	6,000	5,000
Concho Refining Co., San Angelo	250	30	100
Cosden Oil Co., Big Spring	12,000	4,000	6,500
Danciger Refineries, Inc., Pampa	6,500	4,500	5,000
Howard County Refining Co., Big Spring	1,500	(*)	500
McNutt Refining Co., El Paso	2,000	700	700
Panhandle Refining Co., Kings Mill	2,000	1,000	1,000
Paramount Refining Co., San Angelo	2,000	250	400
Pasotex Petroleum Co., El Paso	14,000	4,200	4,000
Phillips Petroleum Co., Borger	30,000	18,000	19,000
Shamrock Oil & Gas Co., Sunray	2,000	1,500	1,800
Shamrock Oil & Gas Co., Meldavis	1,000	(*)	900
Sinclair Refining Co., El Paso	2,500	800	900
Texas Co., El Paso	2,000	(*)	800
Texas Co., Amarillo	4,000	2,500	2,100
West Texas Refining Co., Pecos City	6,000	(*)	(*)
Wickett Petroleum Co., Wickett	2,500	400	400
Total	101,975	43,890	50,200

*Shut down.

Ickes May Make Reservations on Agreements; Oil Taxation and Legislation in Congress

By ANDREW M. ROWLEY

WASHINGTON, D. C., Jan. 8.—All was fairly quiet along the Potomac during the past week. Congress convened with a colorful joint session addressed by President Roosevelt and three bills relating to the petroleum industry were introduced quickly in the House but two of these had been introduced in previous sessions verbatim and close observers feel none has a Chinaman's chance of passage. Oil men are still waiting approval by Harold L. Ickes, Secretary of the Interior and oil administrator, of the pooling and marketing agreements signed recently by oil companies. Mr. Ickes has been especially busy with his duties as public works administrator.

There is a feeling here today approval of the oil agreements may be announced tomorrow. In any event an announcement on the agreements is expected to be made this week.

Three reservations in the pooling agreement are expected to be made by the oil administrator. One that is anticipated is in regard to the section providing that "total gasoline stocks in the United States on July 1, 1934, shall not exceed 46,000,000 bbls., exclusive of natural gasoline." It is felt the administrator will reserve the right to change that figure of 46,000,000 bbls., if, in his judgment, such a change would be for the best interests of the industry and consumers. He is also expected to require that books of the board directing operations of the National Petroleum Agency, the organization provided for in the pooling agreement, be open at all times for government inspection and also that the Government be given a representative on the board of governors of the agency.

No Basic Change

There may be other reservations but none is regarded as changing the basic plan of the agreements and all, probably, will be satisfactory to the petroleum industry.

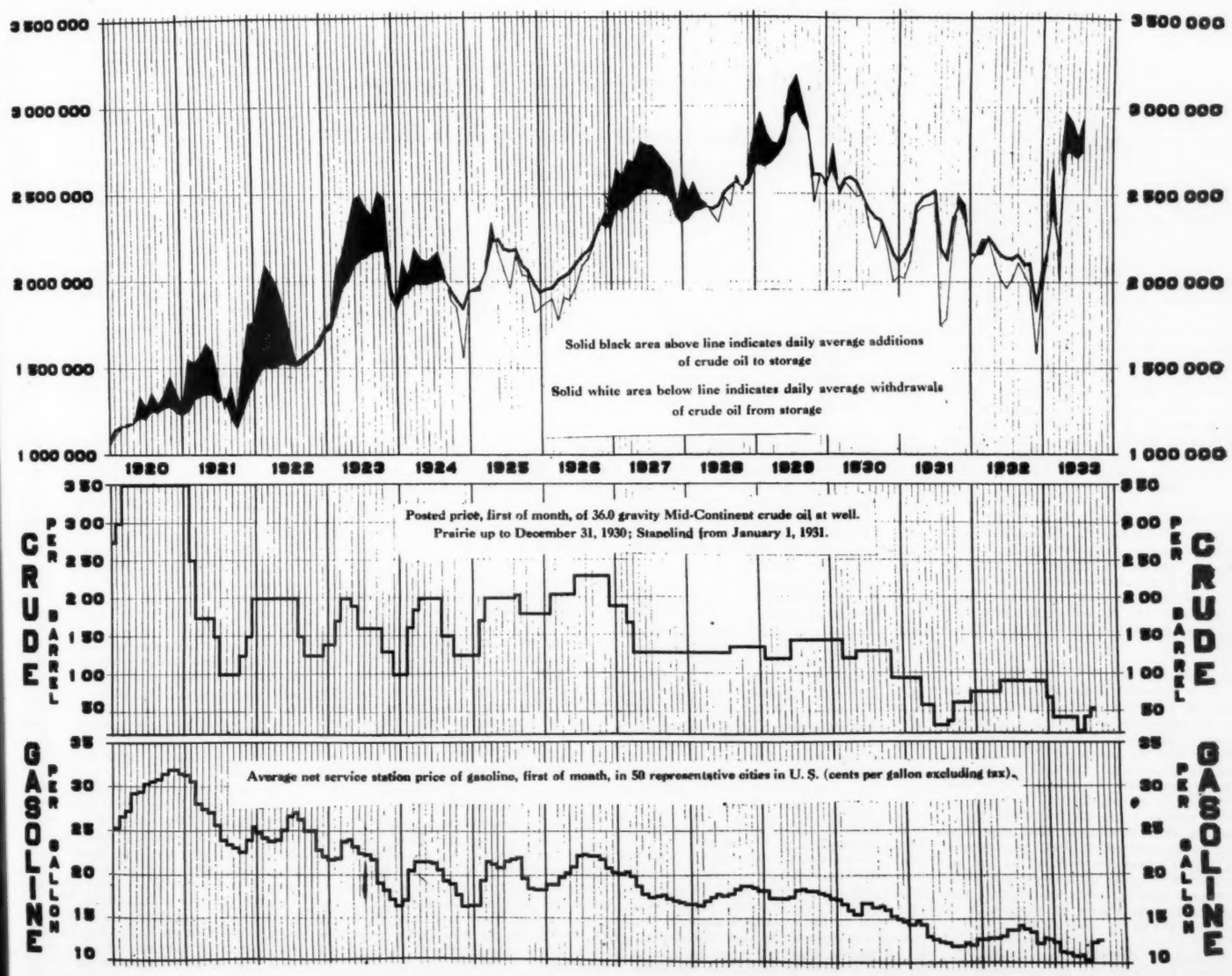
The standard contracts, provided for in the marketing agreement, have been put into final shape by the Planning and Co-ordination Committee and await approval by Mr. Ickes. There are seven of these standard contracts, covering the various phases of marketing and long hours were spent in going over each and making revisions suggested by different members. In their final form, these contracts are regarded as providing for the best and soundest business practices in marketing and as protecting the interests of everyone engaged in this branch of the business. It is understood Mr. Ickes has been kept informed as to the nature of these contracts and the changes being made so that it is felt he is entirely familiar with them at this time and approval of the contracts will not be delayed, according to present information.

Depreciation and Depletion

Especial interest of the oil business in the opening of Congress relates right now to tax matters and proposed changes in depreciation and depletion deductions of the revenue act of 1932. The subcommittee of the ways and means committee has recommended the allowances for depreciation and depletion be reduced by 25 per cent and the Treasury Department has recommended the elimination of the provisions for percentage depletion deductions contained in the present law.

The Mid-Continent Oil and Gas Association has requested that the provisions of the 1932 revenue act pertaining to depreciation and depletion be retained and that no modification be made of these provisions. Clarel Mapes, secretary of the association, and William N. Davis, vice president of Phillips Petroleum Co., and an expert on tax matters, have been in Washington in connection with the request of the Mid-Continent Oil and Gas Association and in the interests of the small producers who would be affected vitally by the recommendations of the government agencies.

Percentage depletion deductions are not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Solid black area above line indicates daily average additions of crude oil to storage
Solid white area below line indicates daily average withdrawals of crude oil from storage
1920 1921 1922 1923 1924 1925 1926 1927 1928 1929 1930 1931 1932 1933
CRUDE PER BARREL
3 50
3 00
2 50
2 00
1 50
1 00
50
Posted price, first of month, of 36.0 gravity Mid-Continent crude oil at well. Prairie up to December 31, 1930; Stanolind from January 1, 1931.
GASOLINE PER GALLON
35
30
25
20
15
10
Average net service station price of gasoline, first of month, in 50 representative cities in U. S. (cents per gallon excluding tax).

Chart indicating production, changes in stocks, price of crude and price of gasoline

only necessary and vital to the oil and gas industry but are essential to the fair and equitable distribution of the tax burdens as between all taxpayers. It is pointed out the hazards in the producing branch of the petroleum industry are such some protection is necessary in the matter of taxes for the average oil man. He may drill four or five dry holes before he gets a producer and the only fair thing is to permit him to consider the losses he sustained in his operations which eventually resulted in a producing oil or gas well. Records of 13 years in the Mid-Continent area show that more than 60 per cent of the first wells drilled on any property whether wildcat or adjacent to production failed to produce oil. In no other major industry do such results and hazards exist.

Other factors entering into this question involve the uncertainty as to the life and ultimate production of a producing well; the uncertainty as to market and the wide fluctuations in price with a resultant irregularity of income.

Special Legislation Unlikely

The feeling is growing it will be hard to pass any special legislation affecting the petroleum industry at this session of Congress. E. W. Marland, congressman from Oklahoma, who was active in matters relating to the petroleum industry at the special session of this Congress which convened last March, told this writer last week he did not believe any additional legislation affecting the oil business is necessary or desirable. He stated he felt the President and the oil administrator had adequate powers under existing laws to correct any evils which might exist in the business. Mr. Marland will work against the passage of any laws which might tend to place the petroleum industry under government control or which might prolong the period when it is not entirely selfgoverning. He is anxious to do everything in his power which will hasten the time when the oil industry will be able to manage its own affairs entirely through its own efforts and without government control in any form. His chief object is to protect the interests of producers, refiners and all others engaged in the oil business in Oklahoma.

Nathan R. Margold, solicitor of the Interior Department and chairman of the Petroleum Administrative Board, with others connected with the board, conferred with Senator William E. Borah last week in regard to the latter's objections to the agreements signed by the oil companies and now being considered by Secretary Ickes. That Senator Borah was misinformed on the situation became apparent when he is reported to have stated objections to the marketing agreement came from gasoline filling station owners who said the margins provided in the agreement were too high and should be lowered. The fact is filling station owners want the margins provided in the agreements increased. However, it was felt, after the conference with Senator Borah, that he was impressed by the fact the Petroleum Administrative Board was doing everything in its power to protect the consumer, the little operator and everyone else connected with the oil business.

Imports and Exports

It is reported some member or members of Congress have asked the Petroleum Administrative Board for figures showing all crude oil imports and exports for the last six months of 1932 and during the period since the code for the petroleum industry became effective and for data on all withdrawals of crude oil from storage since the code became effective. Just what is contemplated cannot be ascertained, in fact, no one will say from whom the request for the information came or definitely admit such a request was received. The request had not been made known officially to Secretary Ickes at the close of last week.

Alcohol Bill

Three bills affecting the petroleum industry were introduced into the House shortly after Congress convened last week. One, by Frank Gillespie of Bloomington, Ill., provides that "it shall be unlawful for any person to sell motor fuel in the United States unless at least 10 per centum thereof, by volume, is alcohol manufactured from agricultural products" and that "there is hereby imposed a tax on motor fuel sold by the importer thereof or by a producer of motor fuel, unless at least 10 per centum thereof, by volume, is alcohol manufactured from agricultural products, a tax of 10 cents per gallon, such tax to be in addition to any other tax imposed by law."

A peculiar thing about this bill is the fact it is identical to the one introduced by Mr. Gillespie at the special session of this same Congress, on March 9, 1933. Bills introduced in one session of Congress may still be considered at other sessions of the same Congress if definite action on them has not been taken. Hence, it is rather odd that Mr. Gillespie either did not realize this fact, or that an identical bill should be introduced and ordered printed.

Pipe Line Bill

F. B. Swank, congressman from Norman, Okla., introduced a bill in the House which is regarded as aimed at pipe lines, although it would cover railroads, buses, trucks and others engaged in interstate commerce. This bill, however, was similar to one introduced by Senator Thomas of Oklahoma in the Seventy-second, or session of Congress prior to last March. It provides "that each of the several states may levy and collect license, franchise, gross-revenue, registration, or any other forms of taxes upon, or measured by, any property employed, or business done, within such State, in interstate commerce, in the same manner and to the same extent as such taxes may be imposed under the constitution and laws of such state upon like property employed, and business done, in commerce wholly within the state, except that (a) in no case shall the tax imposed be at a greater rate than is assessed upon like property employed, and business done, in commerce wholly within the state, and (b) nothing contained in this act shall be construed to authorize the taxation of the same property and business by more than one state."

Such an act, if passed, it is said, would permit states to tax volume or value of products transported by pipe lines across the states, such as gasoline, natural gas or crude oil. With so many businesses engaged in interstate commerce involved, it is felt this bill does not stand any chance whatever of passage but the petroleum industry should watch it.

Quality of Gasoline

Congressman George Huddleston of Birmingham, Ala., introduced a bill which was referred to the Committee on Interstate and Foreign Commerce, which would give the Bureau of Standards authority which might affect seriously operations in the petroleum industry, especially in the refining branch. Under the bill the bureau might even determine the octane number of gasoline and mark every product showing the grade, quality, etc. The bill, as introduced, follows:

"A bill to prevent frauds in commerce, and for other purposes.

"Be it enacted by the Senate and House of Representatives of the United States of America in Congress assembled, that the Bureau of Standards is authorized to adopt and prescribe marks indicating the quality, durability, usefulness, size, strength, grade, quantity, composition, origin, date and process of production, weight, and measure of all objects of commerce, and to adopt regulations for the use of such marks thereon or therewith.

"It shall be unlawful to place in interstate commerce any subject of commerce without having complied with the regulations, if any, applicable thereto which may have been adopted under the authorization of the first section of this act.

"It shall be unlawful for any dealer, or any person who has acquired same for the purpose of resale, to remove from any subject of commerce any mark placed thereon in compliance with this act.

"Violations of this act shall be punishable by imprisonment for not more than two years and a fine of not more than $5,000, either or both."

Hearing for Consumers

A question of jurisdiction or proper procedure on matters relating to the petroleum industry was settled last week when it was decided a hearing on prices called for tomorrow by Arthur D. Whiteside, division administrator of the National Recovery Administration, as a result of complaints filed with the Consumer's Advisory Board, would not include gasoline prices. Arrangements were made whereby such complaints would be presented to the Petroleum Administrative Board and any hearings, if called, would be arranged by that board and not the National Recovery Administration. Consequently, gasoline prices will not be considered at the hearing on commodity prices scheduled for tomorrow in the auditorium of the U. S. Chamber of Commerce.

Wage Differentials

Small refiners and producers throughout the country are vitally interested in sessions which have been held here during the past week by the labor subcommittee of the Planning and Co-ordination Committee on wage differentials under the code for the industry. The code provided for minimum wages and hours but provision was made for differentials affecting different classes of employment such as drillers, stillmen, etc. An important factor in the situation is the fact Oil Administrator Ickes has announced that these differentials, when approved, shall be retroactive to September 2, the effective date of the code.

Tentative figures on these differentials affecting key men in each branch of the industry—producing, refining and transportation—have been decided upon but the committee will hold another meeting Wednesday of this week with representatives of the producing, refining and transportation committees of the Planning and Co-ordination Committee in order that all viewpoints and ideas may be incorporated in the report. It is then planned, according to the present understanding, to ask representatives of labor to consider the differentials. If the labor representatives and representatives of the different subcommittees of the Planning and Co-ordination Committee approve the differentials, the report will be submitted to the Planning and Co-ordination Committee for approval and then presented to Oil Administrator Ickes for final decision.

Rates of pay provided for in the differentials are understood to be somewhat higher than some of the smaller refineries and producers have been paying. With the provisions these differentials shall become retroactive to September 2, if they are approved and made an order by the oil administrator, it is possible many employes could collect fairly substantial sums from their employers and many of the employers, probably, would be in no position to put out this additional money in wages dating back to September 2.

Ohio Oil Company Aids Producers to Meet Competition of Mid-Continent

By ANDREW M. ROWLEY

WASHINGTON, D. C., Jan. 8.—The oil industry last week was treated to a concrete example of the working of the new deal in the business. This new deal is the result of work being done here and throughout every section of the United States by the Planning and Co-ordination Committee under the code of fair competition for the petroleum industry. For the first time in the memory of the oldest inhabitant crude oil producers actually requested the purchasing company to lower its posted prices. This action was taken in the Illinois-Indiana fields last week when producers asked the Ohio Oil Co. to lower its posted prices in that area 10 cents a barrel. The company acceded to the request and on January 5 prices for crude oil in Illinois and Indiana were reduced 10 cents a barrel. The company, entering the spirit of the producers, contributed 5 cents a barrel by reducing its marketing charge that amount.

A serious situation had developed in Illinois. The Ohio Oil Co. had been buying 11,000 bbls. daily out of an allowable production of 12,000 bbls. The company, in efforts to help producers, had kept up the price, that price being based on Mid-Continent prices, plus transportation charges. Reduction in pipe line tariffs, however, placed Mid-Continent and other competitive crudes at an advantage as a reduction in Illinois prices had not been made when pipe line tariffs were lowered.

Storage Filled

As a result Illinois-Indiana producers found themselves with production without a market and the Ohio Oil Co., which had been buying all the production and which had been storing much of this oil over a period of two years, found itself with only 15 days available storage. The company is reported to have stored nearly 11,000,000 bbls. of crude for which no market could be found. At the same time producers in Michigan were endeavoring to obtain larger allowables. Refiners, naturally served with Illinois-Indiana crude were able to buy Mid-Continent and other crudes at lower prices than the postings for Illinois-Indiana and they bought this competitive crude, leaving 5,000 bbls. of production in Illinois and Indiana without a market, even though some companies throughout the area were endeavoring to get permission to withdraw oil from storage. There was a market but the price in Illinois and Indiana, being out of line with competitive districts, prevented that crude from being marketed.

The matter was taken up with the Planning and Co-ordination Committee here, rather with Wirt Franklin, chairman of that committee. Mr. Franklin immediately got busy, ascertained the desires of the producers and, acting as a medium for quick exchange of views, was helpful in solving the problem which threatened the livelihood of the producers and the markets for the crude. The producers held a meeting in Robinson, Ill., on January 3 and made formal requests of the Ohio Oil Co. that that concern reduce its posted price 10 cents a barrel. The company, to help the producers which it had served so unselfishly for years, voluntarily reduced its brokerage fee for marketing the crude, 5 cents a barrel. It is a situation which made everyone feel good and is the best example yet of the give and take attitude which permeates the industry and which will result in quick stabilization of the business.

Purely Local

The price readjustment is not a price cut as the industry has been taught to regard reductions. It is merely bringing Illinois-Indiana prices into line with those of competitive areas and permits marketing all the allowable production of the section. The action has absolutely no bearing on any other area or on the price of any other territory. It is a local situation.

There is a market for this Illinois-

(Continued on Page 38)

Public Paid $320,000,000 Less for 1933 Gasoline Than 1926 But Used 110,000,000 Bbls. More

By W. T. ZIEGENHAIN

The gasoline bill of motorists in the United States will total about $1,987,000,000 for 1933. This is the lowest annual gasoline bill presented within the past eight years despite a most substantial increase in the number of gallons consumed annually within that time. However, if those same motorists would total the amount of the gasoline tax they paid they would find that item exceeded all previous years by a wide margin. During 1933 the average tax rate was more than double what it was just eight years ago.

1926 Chosen as Basis

An eight-year period was chosen for study, first because it starts in 1926, a year used by the United States Government for comparative purposes. Also it is generally recognized as a normal business year. In the period since 1926, we have passed through a most colorful three years of prosperity and three years of the most damaging depression. The background thus affords a wide basis from which to judge present conditions.

Unfortunately for the oil business, it entered its own depression period considerable in advance of the general decline in values. All during 1928, 1929 and 1930, which were banner years for other lines of sales endeavor, the oil business was receiving about 3 cents less per gallon than it did in 1926 for its principal product.

In studying the accompanying tabulation of prices the basis for the above statements will be seen and some explanation should be made now regarding the manner in which the table was compiled.

Method of Compiling Table

The average filling station prices shown in the column at the extreme left were compiled from prices posted on the first of each month in 50 scattered cities in the United States. The price on the regular grade was chosen. In a similar manner the average tax was computed and by deducting the tax from the total station price in each instance, the average cost of gasoline was computed.

The domestic gasoline consumption for each year refers to the Bureau of Mines estimate of gasoline shipped from refineries after due adjustments are made for differences in exports and imports. It does not check with the gasoline consumption reported by the individual states because the states report only that gasoline on which a tax is paid and where tax exemptions are made by the retailer or the tax is evaded, there is no record made of that gasoline.

In a similar manner, the column showing the amount of gasoline taxes reflects larger figures than generally presented. The amount of the tax shown here reflects what would be collected if every one paid the Federal and state taxes and claimed no exemptions because of use of the gasoline in Federal, city or county work. The tax shown here was computed by multiplying the average tax each year by the Bureau of Mines reported domestic consumption.

It should be stated also that no report was available to cover November and December so that it was necessary to estimate the domestic consumption for those two months. This was done on the basis that the total for the period will approximate 2 per cent more than during the same period in 1932.

With this understanding of the method by which the table was computed it will be seen that a direct comparison may be made year for year and gives some idea of the trend of oil company earnings.

Much is said about the price of crude oil at the well, the refinery tank car price for gasoline while the public is most interested in the total filling station price yet not one of these can be used alone to indicate oil company earnings. The filling station price, free of taxes, probably comes closer to serving as the index of earnings than any other figure.

The increase in the average net gasoline price since June 1 when it reached the lowest point in the history of the business to the present level of a little more than 14 cents has prompted some talk of "profiteering" by those who have not acquainted themselves with the details. For the purpose of showing the injustice in such thoughts, the average net filling station prices have been tabulated as of the first of each month over the entire year of 1933 and each of these may be compared with the average during previous years.

Still Too Low

The present average net price of 14.17 cents is about 3¾ cents above the price on June 1, 1933, but is nearly 6 cents under the average during 1926. Remembering that the oil industry entered its depression period early in 1930, the present price should not be compared with the other depression years which followed but with prices that existed earlier. If the extent of gasoline price advances during the past year is to be discussed some comparison should be made with advances made in the prices of other useful commodities. The Department of Labor has just issued its report of wholesale prices for the month of November. It shows that petroleum products sold at only a little more than half their value in 1926 on the wholesale market. The wholesale price of petroleum products showed the least tendency to advance among the individual commodities in the accompanying list. Farm products, about which so much is written to gain sympathy for the man in the field, advanced from the index figure of 46.7 to 56.6 in the past year and petroleum advanced from 48.2 to 51.7. If all commodities in the list are combined to arrive at an average, the improvement is shown by the increase in the index from 63.9 in November, 1932, to 71.1 in November, 1933. In all instances the 1926 price is arbitrarily taken as 100.

WHOLESALE COMMODITY INDEX NUMBERS FOR NOVEMBER AS REPORTED BY DEPARTMENT OF LABOR (1926—100).

	November, 1932	November, 1933
All commodities	63.9	71.1
Farm products	46.7	56.6
Foods	60.6	64.3
Hides and leather products	71.4	88.2
Textile products	53.9	76.8
Fuel and lighting	71.4	73.5
Metals and metal products	79.6	82.7
Building materials	70.7	84.9
Chemicals and drugs	72.4	73.4
House furnishing goods	73.7	81.0
Miscellaneous	63.7	65.5
Petroleum products	48.2	51.6

Quality Better Also

Refiners did not sacrifice quality in the gasoline to accomplish this favorable price relationship but, instead, actually improved the quality of the motor fuel over what it has been at any previous time. This was indicated in The Oil and Gas Journal's annual survey of gasoline quality as published on Page 8 in the December 21 issue. A decided improvement in octane number and volatility, with a move toward greater uniformity was revealed.

Hope that "better days were ahead" caused refining and marketing companies to maintain this high standard of quality. This was done despite financial losses. This was not true of many other industries which operated at a loss month after month over the past two years. Encouragement came from the relatively well maintained consumption of gasoline as shown by the month to month reports. Over the first half of 1933 there was an unfavorable balance when consumption was compared with a year ago, but in July there appeared a definite improvement which has been evidenced over the latter half of 1933. Since July consumption has been estimated to be running about 2 per cent ahead of 1932. December may prove a little disappointing, but not to an extent that will alter the previous statement regarding the improvement for the entire half year.

Annual Cost of Gasoline to Motorists in the United States and the Taxes Imposed

Year—	Average filling station price in U. S. (50 cities) cents per gallon	Average tax per gallon	Net price, cents per gallon	Domestic gasoline consumption (bbls.)	Retail cost of gasoline in U. S.	Federal and state tax	Cost to public after taxes paid
1926	23.26	2.34	20.92	261,813,000	$2,560,000,000	$253,000,000	$2,307,000,000
1927	20.48	2.47	18.01	296,807,000	2,540,000,000	307,000,000	2,233,000,000
1928	20.71	3.08	17.63	328,489,000	2,850,000,000	424,000,000	2,426,000,000
1929	20.98	3.07	17.91	372,468,000	3,280,000,000	480,000,000	2,800,000,000
1930	20.10	3.77	16.33	389,041,000	3,300,000,000	620,000,000	2,680,000,000
1931	16.92	3.83	13.09	401,011,000	2,820,000,000	660,000,000	2,160,000,000
1932	17.39	4.09	13.30	368,574,000	2,690,000,000	633,000,000	2,057,000,000
1933	18.17	5.41	12.76	*372,010,000	2,830,000,000	843,000,000	1,987,000,000
1933 BY MONTHS							
January 1	17.70	5.16	12.54	26,156,000	$196,000,000	$56,000,000	$140,000,000
February 1	16.79	5.16	11.63	22,920,000	163,000,000	49,000,000	114,000,000
March 1	16.65	5.16	11.49	27,634,000	194,000,000	58,000,000	136,000,000
April 1	16.74	5.16	11.58	29,730,000	209,000,000	63,000,000	145,000,000
May 1	16.76	5.16	11.60	33,590,000	235,000,000	73,000,000	162,000,000
June 1	15.98	5.16	10.82	37,082,000	249,000,000	79,000,000	170,000,000
July 1	18.70	5.66	13.06	34,004,000	268,000,000	80,000,000	188,000,000
August 1	19.18	5.66	13.52	36,869,000	296,000,000	87,000,000	209,000,000
September 1	19.66	5.66	14.00	33,903,000	281,000,000	80,000,000	201,000,000
October 1	20.11	5.66	14.45	32,762,000	275,000,000	77,000,000	198,000,000
November 1	19.96	5.66	14.30	*30,059,000	237,000,000	77,000,000	160,000,000
December 1	19.83	5.66	14.17	*27,301,000	227,000,000	64,000,000	163,000,000

*Estimated.

Sinclair Company Secures Flexible Operation in Rebuilding Refinery at Fort Worth, Texas

By C. O. WILLSON

The Sinclair Refining Co. recently completed a rebuilding program at its Fort Worth, Tex., refinery and has added a modernly equipped plant of relatively small capacity to its manufacturing facilities which now includes nine operating refineries in the United States.

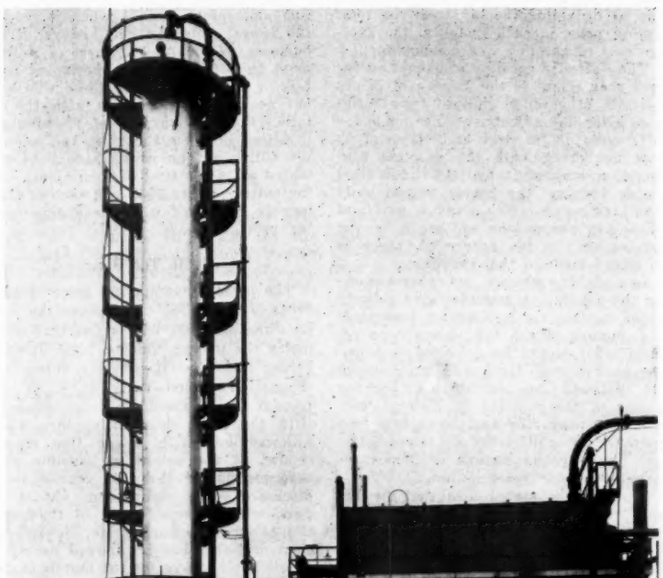
The Fort Worth refinery was acquired three years ago at the time the properties of the Pierce Petroleum Corp. were taken over through merger with the Consolidated Oil Corp., the parent company of the Sinclair operations. The plant, which had a rated crude oil capacity of several thousand barrels daily, had not been operated for several years previous to its acquisition by the Sinclair company. The equipment was largely obsolete so far as present refinery practice is concerned, although company engineers were able to use a part of the materials in building the present plant.

The old plant was operated by the Sinclair company as a skimming unit for a time. Last spring the management decided to rebuild the plant and add cracking facilities so that its products would be comparable in specifications and its operating efficiency in line with that of other Sinclair refineries whose operations have been modernized over the past three years in one of the most extensive building programs of the entire oil industry.

The new plant was designed to secure the greatest flexibility that it is possible to obtain in a refinery having a rated crude oil capacity of from 2,500 to 4,000 bbls. daily. The flexibility was necessary due to the varying properties of the crude oils refined and also the seasonal requirements of the Sinclair marketing department in the consuming area of which Fort Worth is the center. The plant was built to operate with the so-called "bad" crudes of the Mid-Continent when necessary.

Operates With Panhandle Crude

At present the charging stock is a blend of Texas Panhandle crudes made available by the Sinclair pipe line system which connects to that area. Some of the Panhandle crudes, as generally known in the refining industry, present special processing problems due to the presence of objectionable sulphur compounds, including hydrogen sulphide gas, together with a large wax content. The handling of these crudes can be facilitated if the refinery is designed to cope with these unusual properties of the raw material and this objective has been accomplished at the Fort Worth refinery.



Absorber for wet gases of the cracking operation at the refinery. This absorber operates with gas oil recirculated from main fractionating tower permitting all light gasoline to be removed with the pressure distillate from the cracking operation

At present a battery of old shell stills in operation for several years under the Pierce management is used to top the crude oil of a gasoline and kerosene cut. The battery is operated continuously with new fractionating towers for the overhead streams. This shell still operation aids in minimizing the corrosion problems with the crudes now used at the plant.

The cracking installation, including the gasoline recovery and stabilizing plant, is entirely new at the Fort Worth refinery. The one unit was designed to operate with topped crude oil or gas oil as charging stock and also serves as a reformer in securing high octane gasoline from a naphtha cut of the skimming plant. The three types of operations are made possible through variations in temperature and pressure controls. The heater is the de Florez type. The distillation and fractionation features of the cracking unit were developed by Sinclair engineers and are in use at several of the larger refineries of the company.

Operates With Topped Crude

At present the cracking unit is operated with a topped crude secured as a residuum from the shell still battery. This crude oil is first charged to the evaporator shown in the accompanying photograph. In a quenching operation it contacts the hot vapors and liquid from the cracking still. The overhead from the evaporator is taken to the main fractionating tower. The residuum from the bottom of the evaporator passes to a vacuum tower where a gas oil cut is removed. This gas oil can be used as charging stock or sold as furnace oil. The residuum from the vacuum tower is a low

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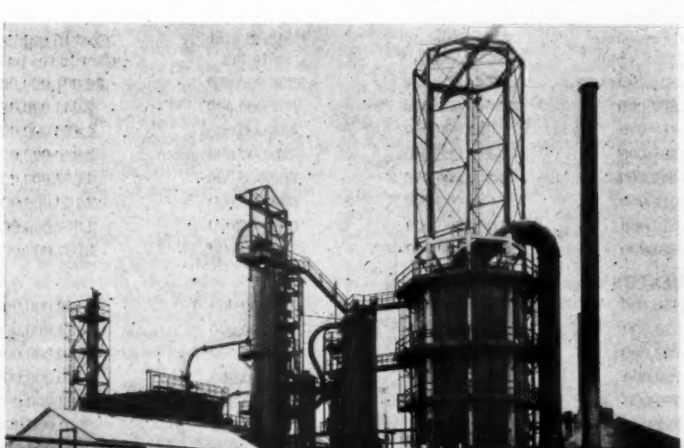


View of the cracking unit recently completed at the Fort Worth, Texas refinery of the Sinclair Refining Co. de Florez type heater is shown on right. Adjoining the heater is the evaporator which connects to the main fractionating tower. Metal building on left houses hot oil charging pump

Open type pump house at Fort Worth refinery housing pumps operated in connection with debutanizer and stabilizer. The open sides avoid the possibility of hydrogen sulphide gas accumulating

Refiners Should Further Their Own Interests by Co-operating With Designers of Diesels

By T. B. RENDEL
Shell Petroleum Corp.

Almost since the day of the original conception of the gasoline engine there have been concurrent developments of engines designed to burn heavy oils as opposed to gasoline. These engines have gone under the generic name of Diesel engines, though it might be noted that Doctor Diesel's original development of an internal combustion engine was designed to burn coal dust.

Now, the engine which is designed to burn heavy oil is essentially different from a gasoline engine both in the nature of the fuel from which it gets its power and in the manner in which this is done. In the gasoline engine a mixture of air, gasoline vapor, and liquid gasoline in a finely divided state, is drawn into the cylinder and compressed to a comparatively moderate degree. Combustion is started by means of an electric spark and the weak flame, thus started, is caught up by the rapid movement of the air in the cylinder and spread throughout the whole mass of air, gasoline, and vapor which are in very intimate contact.

In the case of the heavy oil or Diesel engine, air alone is drawn into the cylinder and compressed. At the top of the compression stroke, fuel is sprayed in liquid form into the highly compressed air in the cylinder and ignited by the heat of this compressed air alone. In this case, combustion may be considered to take place in three stages: First, a delay period, during which no appreciable combustion takes place but the fuel is being heated up to the ignition point; second, the rapid burning of the fuel which has been injected during the delay period; thirdly, the instantaneous ignition of the remainder of the fuel from the fuel injection valve as it enters the flaming gases.

This simplification of the combustion process inside the Diesel engine is due to H. R. Ricardo and has been very largely responsible for the rapid development of the Diesel engine, particularly as regards its high speed type within the last two or three years. So rapid in fact has been the development of the high speed Diesel engine in this respect that it is now in successful competition with that very highly developed prime mover, the gasoline engine, for automotive and tractor use, and in Europe there are now about 12,000 automotive Diesel engines in use, representing approximately 1,000,000 horsepower. Even in this country where economic conditions have not been so favorable to its development there are about 1,000 Diesel engined tractors in use and one of the leading manufacturers of tractor engines is equipping its tractor with Diesel engines in the ratio of about 3 Diesel engined tractors to 1 gasoline engined tractor.

Classification of Diesel Engines

Before dealing in detail with various phases of Diesel fuel properties it will be as well to discuss briefly the type of engines and application for which the fuel is intended since this often determines the type of fuel to be used. Briefly speaking, heavy oil engines can be classified as follows:

1. Low speed, about 300 r.p.m. and below, used mainly for large marine and power plant installations.

2. Medium speed, about 300 to 600 r.p.m., used mainly for medium marine and power plant engines.

3. Medium high speed, about 600 to 1,000 r.p.m., used mainly for (a) wide useful speed range, railcar and tractor; (b) narrow useful speed range used for marine auxiliary sets, small pumping plants, and small marine main engines.

4. High speed, 1,000 r.p.m. and above, wide useful speed range used for automotive truck and bus, tractor, and railcar.

In the following discussions we propose to deal with fuels for the last two cases since such cases are, generally speaking, more sensitive to different fuels, particularly those engines which by reason of their application have to operate over a wide speed range; in fact, it is the necessity for operating over a wide spread range which has been one of the difficult points to overcome in designing high speed Diesel engines for automotive uses. An automotive type engine operates over a speed range from 200 to 2,400 r.p.m., must stand overloading until it is brought to a standstill, and is looked after by a driver who knows nothing of its anatomy. It will be readily appreciated, therefore, that it operates under far more difficult conditions than the power plant engine which is looked after by a trained nurse who anticipates its troubles and which operates at a constant speed, carefully controlled by a governor and is seldom, if ever overloaded.

General Factors Involved

It is very often said that a Diesel engine will burn anything, and while this is a very excellent ideal to aim for it must, nevertheless, be used with considerable caution. Anything is often taken by an oil refiner literally, and may mean a fuel which might vary from a cracked residue containing a very high percentage of b.s. and water and free carbon to a low grade gasoline. Again while many engines will burn an extraordinarily wide variety of fuels, maintenance costs and general trouble will be considerably less if good quality fuels are used.

Of various factors involved in selecting a Diesel fuel, the most important are viscosity, ignition quality, cleanliness, and boiling range. Other factors often indicated in specifications are Conradson carbon, sulphur, ash, and pour-point.

Ignition Quality

From an engineering standpoint and one which affects the design of the engine in many ways is the ability of the engine to completely burn all the fuel injected, and that without causing too great a rise of pressure over the compression pressure. Now, for any given injection timing, the pressure reached during the second stage of combustion and the rate of rise of this pressure, will depend upon the duration of the delay period, that is, the duration of the first stage of combustion. The longer the delay period, the more rapid and the greater the rate of rise of pressure since all this fuel will be present in the cylinder before the rate of burning comes under direct control. The duration of this delay period is, therefore, very important if we are to control the combustion of a Diesel fuel, and the shorter this period the longer the period will be over which we have mechanical control of the entering fuel and hence of the combustion. Now the duration of this delay period can be controlled to a considerable extent by suitable engine design and by providing a suitably located hot point in the combustion chamber to serve as an ignition point. However, the fuel quality plays an important part in respect to this delay period, particularly with regard to its ignition quality. In this respect, Diesel fuels can be considered the exact opposite of gasoline engine fuels. In a gasoline we aim to keep the self-ignition temperature as high as possible in order to avoid detonation of the last portion of the charge to burn. In a Diesel fuel, however, we try to keep the self-ignition temperature as low as possible in order that it may ignite in the shortest possible time after its entry into the combustion chamber.

The ignition quality of a Diesel fuel is dependent upon its chemical structure and as yet there is no standardized method of measuring it. It is necessary at the present stage of the art to measure it in actual engines. Several methods have been proposed; one in this country by the Waukesha Motor Co.[1] in which they use a modified C.F.R. engine and determine the critical compression ratio at which the fuel will fire within three seconds after being injected into the cylinder when the engine is motored over 600 r.p.m. with an air temperature of 100° F. and a jacket temperature of 212° F. The other method is that proposed by Messrs. Boerlage and Broeze[2], who measure the actual ignition delay in a large slow speed solid injection engine at a compression pressure of 450 pounds per square inch compression pressure. This delay is compared with the delay obtained on mixtures of cetene and alphamethyl naphthalene and the percentage of cetene which gives the same delay as the fuel under test is called the cetene number. This cetene number is therefore, equivalent to the octane number of the gasoline, in that it is a measure of the ignition quality.

Considerable research work is going on with regard to the measurement of and importance of the ignition quality of Diesel fuels and there are a number of committees of the Society of Automotive Engineers and the American Society of Mechanical Engineers studying this subject. In respect to the present development of the high speed Diesel engine, good ignition quality is important, since the present high speed Diesel engines are sensitive to ignition quality. However, it must not be supposed that such sensitivity is a desirable feature and it cannot be too strongly emphasized that improvement of the ignition quality of the Diesel fuels is not the only way to shorten the delay period and hence control the combustion in solid injection Diesel engines.

This can be done quite easily by suitable changes in engine design such as providing a hot corner in which to inject the fuel and by rapid movement of the air inside the cylinder to enable the oxygen to search out all the small particles of fuel.

Viscosity

Another important property of the Diesel fuel is its viscosity. Clearly if we are to have any real control of the injection timing and quantity of fuel injected we must control the viscosity of the fuel within reasonable limits. Many fuels of the distillate class now being recommended for high speed engines have a rather low viscosity which may eventually cause some trouble. If a low viscosity fuel is used there is considerable leakage past the fuel pump plunger and injection valve which upsets the injection timing and amount of fuel injected at various stages of combustion.

(Continued on Page 43)

[1] S.A.E. Journal, March, 1932, "Compression Ignition Characteristics of Injection Engine Fuels," A. W. Pope, Jr.
[2] S.A.E. Journal, July, 1932, "Ignition Quality Expressed in Cetene Numbers," by G. D. Boerlage and J. J. Broeze.

Administrator's Report on Crude Stocks

Stocks of domestic and foreign crude petroleum at the close of the week ended December 30 totaled 342,475,000 bbls., a decrease of 164,000 bbls. from the total of 342,639,000 bbls. reported for the preceding week, Harold L. Ickes, Secretary of the Interior and administrator of the code of fair competition for the petroleum industry, announced today. This decrease represented a daily average of approximately 23,000 bbls. compared with last week when stocks were unchanged. Stocks of domestic crude oil totaled 339,614,000 bbls. on December 30, an increase of 6,000 bbls. over the total on hand the preceding week, while stock of foreign crude oil held in the United States amounted to 2,861,000 bbls., a decline of 170,000 bbls. from the total of 3,031,000 bbls. on hand a week ago.

Current import statistics recorded a decrease of 168,000 bbls., or 24,000 bbls. daily, in receipts of foreign crude oil during the past week as compared with the preceding week. Daily average crude runs to stills during the week ended December 30 were approximately 2,275,000 bbls., a decrease of about 80,000 bbls. from the daily average of the preceding week. Total stocks of finished motor fuel decreased approximately 180,000 bbls. during the week and on December 30 totaled about 51,000,000 bbls.

CRUDE PETROLEUM STOCKS REPORTED BY COMPANIES HOLDING 100,000 BBLS. OR MORE

Grade of crude oil—	Stocks held by reporting companies Dec. 23, 1933 (bbls.)	Stocks held by reporting companies Dec. 30, 1933 (bbls.)	Change from Dec. 23, 1933 (bbls.)
Pennsylvania Grade	5,269,000	5,360,000	+91,000
Other Appalachian, including Kentucky	1,158,000	1,186,000	+28,000
Lima, N.E. Indiana, Michigan	1,553,000	1,611,000	+58,000
Illinois, S.W. Indiana	11,060,000	11,161,000	+101,000
N. Louisiana and Arkansas	11,692,000	11,877,000	+185,000
West Texas and S.E. New Mexico	32,468,000	32,039,000	—429,000
East Texas	43,778,000	43,998,000	+220,000
Other Mid-Continent	153,914,000	154,131,000	+217,000
Gulf Coast	16,158,000	15,615,000	—543,000
Rocky Mountain	27,176,000	27,216,000	+40,000
California	35,382,000	35,420,000	+38,000
Total domestic crude	339,608,000	339,614,000	+6,000
Foreign crude	3,031,000	2,861,000	—170,000
Total crude	342,639,000	342,475,000	—164,000

Natural Gas Industry Code Hearing Brings Out the Peculiar Difficulties of Utility Business

By ANDREW M. ROWLEY

WASHINGTON, D. C., Jan. 8.—Symbolic of the general attitude of the petroleum industry towards efforts being made to rehabilitate business is the hearing held here last week on the code for the natural gas industry. It was the first hearing held under the National Recovery Act on any public utility and the natural gas industry voluntarily formulated the code and presented it to the administration for approval.

Leaders of the natural gas industry came to Washington to give the administrator of the National Recovery Act all information desired as to the operations of the business. The hearing took on the aspects of a natural gas convention during the morning and of a convention of the coal association during the afternoon. Everyone was here to take part in a friendly discussion of the questions involved. Ralph Gallagher, president of the East Ohio Gas Co.; Joe Creveling, of the Doherty interests; Howell Cooper, of Hope Natural; Frank Schauer, of Equitable; H. L. Dickerson, of Electric Bond & Share; and others who have devoted their services to trying to give communities an adequate supply of "nature's wonder fuel." The bituminous and anthracite operators were represented by men whose forceful talk and logic evidently made an impression upon the NRA committee conducting the hearing. In this statement should be included the presentation by Morgan J. Hammers of the Oil Burner Code Authority.

The natural gas business essentially is different than most other industries in that it is under obligation to render a continuous and uninterrupted public service and its standards of service and rates charged the consuming public, are to a large extent, regulated by public authorities having such powers. In other words, it must give 24-hour a day service at rates regulated by state authorities, and this service varies, that is the quantity of the product sold, varies as high as five to one, depending on weather and other conditions. But a maximum personnel is necessary to take care of peak loads regardless of minimum requirements or average sales.

Gas Code Different

The natural gas industry is different from most industries coming under the codes being formulated for industry. Rates of return in the natural gas industry are determined by public service commissions or other state regulatory bodies. Yet the service rendered must cover all needs and these vary as the weather changes. It is a business where an adequate force must be employed at at times to take care of a peak load.

The code for the natural gas industry was prepared by a code committee of the Natural Gas Division of the American Gas Association, represented by the National Recovery Administration as representing 122 members controlling 168 subsidiaries and affiliates, employing 60 per cent of the workers in the business; serving 72 per cent of all natural gas consumers; and doing 67 per cent of the annual business of the industry. H. L. Dickerson, Electric Bond & Share Co. of New York, is chairman of the code committee and presented the code as formulated to the hearing held here.

The code as presented provides for a maximum of 40 hours per week average for employes on noncontinuous operation and 48 hours per week average for those working on shifts. The minimum wages are graded from $12 to $15 per week according to the population of the city with a $1 per week differential in the South; the hourly wages proposed being at least 25 cents an hour in the South and 30 cents an hour in the North or the 1929 rates for the same work, whichever rate is higher, up to 35 cents and 40 cents an hour, respectively.

It was brought out in the hearing that wages paid in the natural gas industry have been rather high as compared to other industries, the average in the natural gas industry in 1929 being $25.92 per week and $26.53 per week in 1932.

The natural gas industry, at the hearing, emphasized the fact this industry cannot increase its rates to take care of additional expenses under any code adopted as its rates are fixed by state commissions. It was pointed out that, because of the unusual application of this business, more steady employment is assured its employes than in any other industry. It maintains a 24-hour service at a maximum capacity.

The whole attitude of the natural gas industry may be expressed in a short sentence: That industry is co-operating with the NRA to the full extent of its ability but it cannot increase wages or its expenditures unless state authorities give it permission to increase its rates. In other words, its income is limited by state authority and its expenses and expenditures must be regulated accordingly.

Coal dealers of the United States presented arguments at the hearing showing how natural gas had displaced coal in different areas. The coal men ask that a fair practice regulation be included in the natural gas industry code.

Oil Burner Argument

Especial emphasis was laid on the matter of utility companies selling gas and oil burner equipment. In this connection the Oil Burner Authority submitted the following:

"On the strength of the facts as submitted with respect to the entire subject of utility merchandising, and specifically with respect to the effect these practices have on members of the oil burner industry and other groups competitive with the utilities, the oil burner code authority submits that there has been proved cause for intervention by the National Recovery Administration on the following grounds:

"That the public utility industry by reason of its failure to establish fair trade practice regulations under an NRA code, have an unfair competitive advantage over the oil burner industry, which is operating under a code containing reasonable and effective provisions for governing competition. This unfair competitive advantage applies also to the detriment of the petroleum industry, gas appliance industry, coal industry, stoker industry and the general retail business all of which are operating under provisions of fair practice and all of which are competitive either from a fuel and/or appliance standpoint with the gas utilities.

"That it is the intent and spirit of the NRA and of code interpretations made subsequent to the enactment of the act that such unfair competitive advantages should not exist between groups of competitive industries.

"That the present and past merchandising practices of public utilities have, in the main, been grossly unfair, and have adversely affected the business welfare and stabilization in many competing merchandising groups and over a wide area of the country, thus tending to defeat the administration's program for recovery.

"That there is no means of obtaining relief under existing regulatory bodies with the exception of the National Recovery Administration."

Suggested Remedy

The first, most direct, and most desirable remedy is for the National Recovery Administration to require the public utility companies to abandon entirely all merchandising activities in line with the thought contained in Article 7, Rule 2 of the suggested standard code which reads: "No member of the industry shall require that the purchase or lease of any goods be a prerequisite to the purchase or lease of any other goods."

If in the opinion of the administrator this recommendation, which has been persistently advocated, is not considered feasible under existing statutes, then the oil burner code authority declares that the following alternative step, taken to permit adequate and uniform redress from an unequal and ruinous competitive situation, cannot be questioned as to fairness:

1. That public utility companies be required to segregate their merchandising activities entirely from their public utility functions.

2. That such segregated merchandising departments be required to operate as though they were separate corporate entities depending for revenues solely on the sale and service of such appliances as are sold with the operating costs established by a uniform system of cost accounting acceptable to the administrator.

3. That additional trade practice regulations be included for such segregated merchandising departments and that these regulations provide:

(a) That it shall be considered unfair competition to sell and/or exchange any product below cost, determined by a uniform system of cost accounting.

(b) That it shall be considered unfair competition to induce purchase of appliances through use of premiums.

(c) That it shall be considered unfair competition for a utility company to list on the consumer's gas and/or electric power invoices any payments due on appliances purchased.

(d) That it shall be unfair competition to employ misleading advertising or to defame a competitor or competitor's products and service.

(e) That it shall be unfair competition to grant financing terms more liberal than 80 per cent of the charges made by reputable financing institutions on sales involving time payments extending more than nine (9) months.

(f) That there shall be a down payment on any appliance purchased and/or installed and subsequent payment each 30 days until the complete cost is covered.

(g) That free service shall not be extended on any gas heating burner, gas hot water heater or gas range more than one year from date of installation.

(h) That no appliance shall be offered with a repurchase agreement.

(i) That it shall not be permitted to return merchandise at other than fair market value at the time of its return, except merchandise having manufacturing defects.

(j) That no second-hand merchandise may be purchased or credit allowed for same at an amount greater than its fair market value.

(k) That the giving of gratuities or the making of payments to any employe or agent of a customer or prospective customer shall be considered unfair competition.

Northeastern Oklahoma Supplier Group to Hear Code General Counsel at Tulsa

The members of the northeastern Oklahoma district of the American Petroleum Equipment Industry and Trade group operating under the NRA code were called by J. L. Shakely, division chairman, to meet in the Chamber of Commerce, Tulsa, January 9, for the purpose of meeting Wharton Weems, general counsel for the code authority for this group whose headquarters are in Houston, Tex. This organization is composed of manufacturers, distributors and representatives supplying equipment to the petroleum industry.

The group is organized under the NRA and its members are doing business under the provisions of the code and Mr. Weems was to explain the methods followed in making allocations to the representative groups of this association and endeavor to answer such questions as were put to him. It is hoped the members may form an organization for the administration of the code and carrying on its purposes. Mr. Weems has recently been at NRA headquarters in Washington.

The country has been subdivided into four districts known as Eastern, Mid-Continent-Rocky Mountain, Southwestern and Pacific. Oklahoma and Kansas are in the Mid-Continent and Rocky Mountain district and in this district there are four sectional headquarters located at Tulsa, Oklahoma City, Okla., Wichita, Kans., and Casper, Wyo.

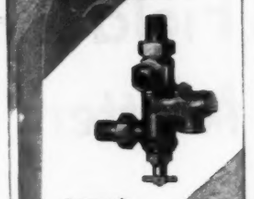
Oklahoma has been divided into two sections, the northeastern section being east and north of Chandler, with J. L. Shakely, vice president, Frick-Reid Supply Corp., Tulsa, as division chairman. Earl W. Miller, vice president, American Iron & Machine Co., Oklahoma City, is division chairman for the other Oklahoma division.

There are six directors for the Mid-Continent-Rocky Mountain district, who are also members of the code general committees: J. L. Shakely, vice president, Frick-Reid Supply Corp., Tulsa; A. A. Buschow, president, Bridgeport Machine Co., Wichita, Kans.; Earl W. Miller, vice president, American Iron & Machine Co., Oklahoma City, Okla.; A. A. Moody, Jarecki Manufacturing Co., St. Louis, Mo.; F. E. Bernsen, president, Lucey Products Corp., Tulsa, and W. J. Morris, president, Continental Supply Co., Dallas, Tex.

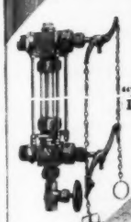
The Oklahoma division is further divided into three groups with W. M. Bovaird, president, Bovaird Supply Co., as head of the supply group; Walter O'Bannon, Walter O'Bannon Co., Tulsa, chairman of the manufacturers group, and Herman B. Hendershot, vice president, Hinderliter Tool Co., chairman of the service group.

"ALL IRON" LIQUID LEVEL GAGE

FOR 500 LBS. WORKING PRESSURE AT 750° F.


Automatic Injector

Ejector, Syphon or Jet Pump


"Navy Type" Liquid Level Gage

"Safeguard" Automatic Liquid Level Gage

"All-Iron" Automatic Liquid Level Gage

Gas Engine Lubricator

Snap Lever Oiler

Plain Brass Oil Cup

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HERE is a liquid level gage that is ideally suited to the difficult service requirements of the oil industry. It is made from a special high strength alloy iron and is of exceptionally rugged construction throughout. It is used wherever the liquid handled makes iron preferable to brass, and is recommended for working pressures to 500 pounds per square inch at 750° F.

The Penberthy "All Iron" Liquid Level Gage is automatic in operation. Ball check valves in both the upper and lower body close immediately and positively to prevent the loss of liquid when the glass is broken; the hand operated stop valves may then be closed with safety and a new glass inserted. The drain cock is integral with the lower gage body and is provided with thread for drain connection.

Penberthy Liquid Level Gages are carried in stock by supply houses everywhere.

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Treatment of Flood Waters in Bradford Field for the Removal of Corrosive Suspended Matter

By L. J. CLARKE
Chemist, Bovaird & Co., Bradford, Pa.

A consideration of the method of flooding as practiced in the Bradford Field in McKean County, Pennsylvania, and Cattaraugus County, New York, shows that the most important requirement of a flooding water is that it be clear and free from suspended matter, not only as it enters the pressure lines, but also in its travel through the pressure lines to the sand. Since the water is directly responsible for the movement of the oil through the sand, any factor that interferes with the free entry and travel of the water into the sand must affect the ultimate production of oil. It will be readily appreciated that continued deposition of suspended matter on the face of the sand can only result in building up a slimy mass which under pressure will be forced into the pores, reducing their intake capacity. Over a period of time this condition may result in total plugging of the intake wells before complete recovery of oil has been effected.

The suspended matter may be present originally in the raw water as silt, sand pumpings, organic matter, etc., or it may form as a result of aeration—as in the case of dissolved iron being oxidized to the insoluble state. Lastly, and this is the case with which this article is concerned, it may occur in the pressure lines as a result of corrosive action of the water on the metal piping of the distribution system.

Looks Like Ketchup

Anyone who has observed the "flushing out" of water lines on flooding properties, is familiar with suspended matter of this origin. With a corrosive water the flushings usually contain many times the amount of foreign matter originally present in the water and frequently are so heavy with iron as to resemble ketchup. It is quite likely that more iron goes into the intake wells than is ever cleaned out by flushing, and when the extreme fineness of the sand is taken into consideration, the wonder is that the sand takes water very long under such a condition.

Suspended matter occurring originally in the water, and that resulting from oxidation of dissolved iron in the raw water is readily taken care of by aeration and filtration. The use of filters for this purpose has become widespread in this field. Many operators of filters have been surprised by the amount of foreign matter filtered out of the water in just a 48-hour run, on waters that were not considered very turbid. Others, having put in filters on comparatively clear waters as insurance against occasional slugs of sand pumpings and seasonal accumulation of organic matter, have seen their action justified by the amount of material caught by the filters, that would otherwise have gone into the sand.

Protective Coating

Suspended matter occurring as a result of the character of the water, i.e., products of corrosion may be eliminated by a protective coating on the inside of the pipe. The coating may be applied artificially, as in the case of cement and other coatings put on at the mill, or it may be formed chemically by treatment of the water so that it will deposit its own protective coating.

Even artificial coatings deteriorate in corrosive waters and complete protection is only obtained by correction of the water. While the use of coated pipe is a step in the right direction, there is an enormous quantity of pipe already in use, replacement of which would be economically impractical. For the protection of this piping and the elimination of suspended matter due to corrosion, treatment of the water offers a practical and inexpensive remedy.

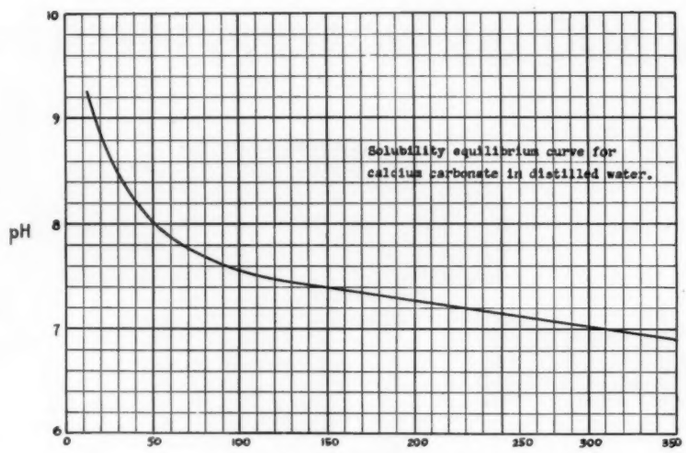

Figure 1

Before taking up the method of treating water, it might be well to mention some factors that influence corrosion of distribution systems. It is well known that water, coming in contact with iron, dissolves some of it. This action is affected by a number of variables, the most important probably being the concentration of dissolved gases, oxygen and carbon dioxide, the amount and character of dissolved salts and the alkalinity and pH of the water. Briefly, the pH denotes the intensity of alkalinity or acidity. Water is neutral at pH 7.0—alkaline above 7.0 and acid when less than 7.0. The higher the pH value, the more intense is the alkalinity and, likewise, as the pH decreases, the intensity of acidity increases.

The effect of dissolved oxygen is greatest at the start of corrosion where the metal in contact with the water is still clean, but as corrosion progresses the other factors become of major importance. When iron dissolves in water, hydrogen is liberated, which, if undisturbed, will form a gaseous protecting film over the metal. But all natural waters contain oxygen, which combines with the hydrogen-forming water, and the gaseous film is destroyed. However, the condition of a clean metal does not last very long since the products of corrosion precipitate and form a more permanent film over the metal. The character of this film and the factors that influence its formation then become the most important in the control of corrosion.

If the film is composed largely of precipitated iron, which is usually the case with a water of low pH value, very little protection is afforded the pipe, because the ferric hydroxide is permeable and corrosion continues beneath the film, forming pits and tubercles. These weakly-formed tubercles break off and expose the metal again to the water. However, if the water contains certain constituents of low solubility like calcium carbonate in sufficient quantity, they are precipitated by the action of corrosion and form a tough, compact, permanent coating, which will prevent the water from coming in contact with the metal. When this condition is realized, corrosion is stopped.

Ground Water Content

All ground water supplies contain some calcium carbonate, usually occurring as the bicarbonate, i.e., held in solution by carbon dioxide. The amount present varies widely and depends on the pH value of the water. A curve by Baylis[1] (Fig. 1) shows the saturation equilibrium of calcium carbonate varies from 15 parts per million to over 350 parts per million between the pH values 9.2 and 6.8. At pH 8.0 water is saturated when it contains 50 parts per million of calcium carbonate, whereas 300 parts per million are held in solution at pH 7.0.

This curve is based on calcium carbonate in distilled water, no other salts being present. The presence of other salts changes the curve. For example: Water containing 10 parts per million of magnesium carbonate will hold almost 100 parts per million of calcium carbonate at pH 8.0 as against only 50 parts in distilled water. Numerous other salts also affect the solubility of calcium carbonate, so that it is necessary to determine the saturation point by tests for each particular water.

Generally, waters with pH and alkalinity, which, when plotted give points on or above the curve, will not be corrosive, while those giving points below the curve will be corrosive in proportion to the location below the curve. As an illustration, a water of pH 6.8 and alkalinity of 50 can be expected to corrode pipe with which it comes in contact. One of pH 7.5 and alkalinity of 50 will also

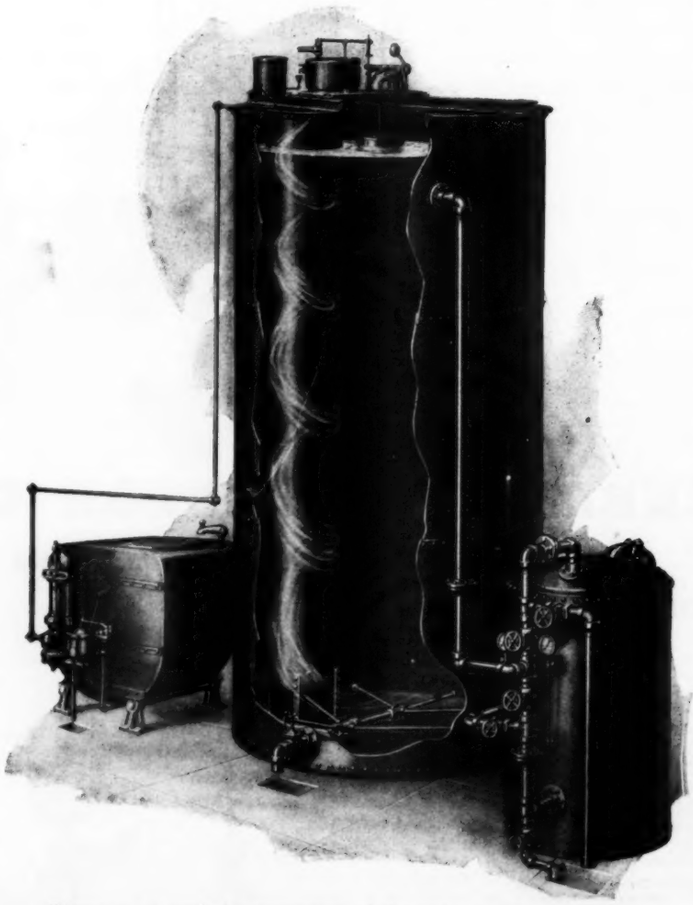

Figure 2—A typical arrangement of the water treating equipment

[1]Ind. Eng. Chem., July, 1927.

Distress Gasoline

It distresses the automobile engine because it knocks

It distresses the refiner because it's hard to sell—because it knocks

It gives the industry a pain because it breaks the market—because it must be sold

Dubbs cracked gasoline is never in distress There is never enough to go round, even when ordinary gasoline goes begging

Dubbs cracking gives the highest yield of the best anti-knock gasoline from any charging stock at lowest cost—royalty and all

Dubbscracking pays

Universal Oil Products Co
Chicago Illinois

Dubbs Cracking Process
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be corrosive, but less so than the first. An appreciable proportion of the waters of the Bradford Field are below the curve.

Providing Insoluble Pipe Coating

Since the corrosiveness of water is nullified by a protective coating on the surface of the metal, a practical method of correcting a corrosive water is by treating it so as to form an insoluble coating at the point where corrosion is taking place. This is done by the addition of just enough lime to make it saturated or nearly saturated with calcium carbonate.

Water that is at the solubility equilibrium of calcium carbonate will deposit a coating on the inside of a pipe, because in the process of corrosion, carbon dioxide is taken from the water. The solubility of calcium carbonate depends on the carbon dioxide and if some is absorbed, the saturated water becomes supersaturated. When this point is reached, calcium carbonate will be deposited until equilibrium is again reached, and the corroding iron becomes coated with a protective film of calcium carbonate.

Only a thin film is necessary for protection, and the treatment must be maintained within close limits, because if too much lime is fed, the water becomes supersaturated and calcium carbonate will be precipitated in the main body of the water, bringing about the very condition that is to be overcome, namely, the occurrence of suspended matter.

During certain seasons the carbon dioxide content of waters may increase. The treatment should be increased accordingly, otherwise the water remains undersaturated and will dissolve the coating already formed. When a thin film has been formed on the pipe, the treatment should be adjusted so that it will just be maintained and no additional coating deposited.

In the application of this method of corrosion prevention in the field, the raw water is first flowed into a primary settling tank where the greater part of the suspended matter is allowed to settle out. From there it is pumped to a treating tank through a water control which regulates the flow to a constant predetermined rate. Here the lime is applied by means of a solution feeder, which proportions the lime to the amount of water delivered by the water control.

Necessity of Water Control

Since the success of the process is dependent on the accuracy of the chemical feed, the necessity of a water control operating in conjunction with the lime feeder is apparent.

The treating tank is large enough to provide sufficient holding time for the lime to go into solution, and is provided with a reaction tube where the lime and water are thoroughly mixed. This tube also prevents the treated water from short-circuiting to the tank outlet. The treated water is filtered and delivered to the clear water tank, from which it is pumped into the pressure lines. The entire process is automatic in operation. The rise and fall of the level in the treated water tank controls the starting and stopping of the chemical feeder.

The treatment is governed by daily tests made on the water for pH and alkalinity. These tests are not complicated and may be easily and quickly made by the average plant operator, taking only about 15 minutes a day. Sections of pipe are examined periodically from various points in the distribution system, and the treatment regulated accordingly. A typical arrangement of the treating equipment is shown in Figure 2.

Use of the chemical process to build up protective coatings in water lines is not new, as it has found wide application in the municipal waterworks field. Baltimore, probably the first of the larger cities to adopt this means of corrosion prevention, has been treating its municipal supply for the past 10 years with remarkable success.

It must be remembered, however, that due to the special considerations involved, the treatment of flood waters must be held within closer limits than is necessary in the case of a municipal supply. The feeding of lime haphazardly in a corrosive flooding water may be more harmful than no treatment at all, or at least equally harmful.

Lime Treatment

The application of lime treatment for flooding waters has been comparatively recent, but even in the short time it has been used the results have been very satisfactory.

An interesting example concerns two adjoining properties having practically the same sand conditions and similar waters. One lease, flooded with the raw untreated water, showed a premature decrease in the intake of the water wells, which was accompanied by an abnormal decrease in production. The other lease, flooded with treated water, continues to hold its original input and the production has held constant.

Treatment of water to eliminate the suspended matter due to corrosion has been proven practical and economical. Its cost is negligible in comparison with the value of the property involved. This being so, it would seem that producers should give serious consideration to this question, which may prove to be a most important factor in the life of a flooding property.

TEXAS UNIVERSITY LANDS

AUSTIN, Tex., Jan. 8.—The board for mineral development of University of Texas lands has called for bids February 2 on oil leases in 18 sections of land in Edwards County. One-eighth royalty and minimum bonus ranging from $1 to $2.50 per acre will be required, awards going to the bidder offering the highest additional cash bonus.

W. N. FERMIN DIES

Wilbur N. Fermin, California sales manager for Baker Oil Tools, Inc., passed away December 19 at his home in Los Angeles, after a short illness.

Definite Improvement in Crude Stock Situation

WASHINGTON, D. C., Jan. 8.—Definite improvement has been made in the crude oil stock situation since the code for the petroleum industry became effective. The code became effective September 2. The following table represents the comparison of crude oil stocks in the different districts, as reported weekly by the Department of the Interior.

District—	Change from Sept. 30 to Dec. 30 in barrels
Pennsylvania crude	—60,000
Other Appalachian, inc. Ky.	+158,000
Lima, N.E. Ind. and Mich.	+345,000
Ill. and S.W. Ind.	+230,000
N. La. and Ark.	—45,000
W. Tex. and S.E. N. Mex.	—942,000
East Texas	—4,646,000
Other Mid-Continent	+1,848,000
Gulf Coast	—1,563,000
Rocky Mountain	—146,000
California	+44,000
Total domestic crude	—4,777,000
Foreign crude	—325,000
Total crude stocks	—5,102,000

Coal Men Urge Tax Be Levied on Natural Gas

WASHINGTON, D. C., Jan. 8.—The National Coal Association, in a bulletin to its members, states progress toward the preparation of a Federal legislative proposal to tax natural gas has been made by the organization at a conference held here January 5 of a subcommittee named December 14 and at a meeting of the general committee held January 6 at which the report of the subcommittee was received. The result of a conference is summarized in the following four resolutions which were adopted unanimously:

"That it is the sense of this committee that the bill to be prepared imposing a tax on natural gas shall provide for the tax as an excise tax on all natural gas sold, the tax to be levied upon the volume of natural gas so sold, whether blended with artificial gas or not, and such tax to be collected and transmitted to the Government by the individual or corporation which sells or distributes such gas to the consumer.

"That we propose a tax of 5 cents on each 1,000 cubic feet of natural gas.

"That it is the sense of this committee that the subcommittee appointed at the last meeting be continued for the purpose of preparing final draft of bill along the general lines of Form No. 11 submitted to the subcommittee at this time; subject to such modification as in the opinion of the subcommittee is necessary to bring the final form in harmony with the views expressed and adopted at this meeting.

"That the president of the National Coal Association be requested to appoint a committee of operators to take charge of this bill and that the subcommittee of lawyers deliver to such committee its final draft of the bill."

Ickes Reassures Borah Consumers Are Protected

WASHINGTON, D. C., Jan. 8.—The following letter has been sent to Senator William E. Borah by Harold L. Ickes, Secretary of the Interior and oil administrator under the code of fair competition for the petroleum industry:

"My dear Senator Borah:

"Your letter of December 28, 1933, raising some specific objections to the proposed pool and marketing agreements for the petroleum industry, has been received. Subsequent to the receipt of your letter, you conferred with members of the Petroleum Administrative Board of the Department of the Interior concerning these agreements.

"The board has advised me that you expressed your sincere appreciation of the efforts of the oil administration to safeguard the consumer against any unwarranted increase in prices. I appreciate your expression of confidence.

"As you were informed during your conference with the board, the meritorious points presented in your letter to me were raised by the board within a few days after the submission of the agreements and prior to receipt of your letter. Under my directions, the board at that time began to gather accurate statistical data bearing on these points, and to hold informal hearings and conferences with groups in the industry in order to obtain the necessary facts to guide me in arriving at a decision. These data are being assembled for a report to me from the board.

"I am in entire sympathy with your statement to the board that you desire primarily to protect the interests of the consumer and of the independents in the industry, and wish to assure you that every precaution will be taken by me to attain those ends."

Tax Records Show Rise in Consumption of Motor Fuel

Consumption of gasoline in Oklahoma during the last months of 1933 exceeded that for the corresponding periods of 1932, according to reports issued from time to time by the Oklahoma Tax Commission, which makes the collections.

December collections totaled $890,075, compared with $830,368 in December, 1932, a gain of $59,706. This was on gasoline used during the month of November.

Gasoline inspected for taxation during November, 1933, and on which taxes were paid in December, totaled 22,499,794 gallons, compared with 21,084,394 gallons a year before, for a gain of 1,415,400 gallons.

DEATH OF NEIL LANE

C. F. (Neil) Lane died recently in Tulsa. He was formerly employed by the Southwestern Engineering Co. and later by the Hurley Gasoline Co. Deceased was a native of Bradford, Pa. Funeral and burial were held in Tulsa.

Bureau of Mines Report on Petroleum and Refined Products for November

Crude petroleum: According to reports received by the Bureau of Mines, Department of Commerce, the production of crude petroleum in the United States during November, 1933, totaled 69,755,000 bbls. This represents a daily average of 2,325,000 bbls., or 127,000 bbls. below the daily average of the previous month; this decrease marked the third successive month in which crude production has declined materially. Practically all of the decrease in output in November occurred in Texas; in fact, the rest of the country increased its output by 2,000 bbls. daily. Daily average production in Oklahoma was practically unchanged at around the 500,000-bbl. mark. Production in California showed a small decline, with decreases at Kettleman Hills and Santa Fe Springs outweighing an increase at Huntington Beach. Nearly all the fields in Texas declined in output in November, the largest decrease being recorded in the East Texas Field. The output of that field in November was 447,000 bbls. daily, or 78,000 bbls. below the October figure. Drilling activity declined in the majority of the fields, although there were more completions in the East Texas Field than in October and nearly as many as in November a year ago.

Total stocks of refinable crude declined 1,271,000 bbls. during the month, or from 356,885,000 bbls. November 1, to 355,614,000 bbls. on November 30. This decline was confined almost exclusively to tank farm stocks of East Texas crude; in fact, stocks of all other grades were materially increased during November.

Daily average crude runs to stills continued to decline and in November amounted to 2,282,000 bbls., compared with 2,434,000 bbls. in October and with 2,183,000 bbls. in November a year ago.

Refined products: Decreased crude runs and a reduction in the straightrun yield of gasoline outweighed the effect of increased yields from cracking and blending natural gasoline with the result that the production of motor fuel declined appreciably in November. The total indicated domestic demand for motor fuel in November was 30,262,000 bbls., a daily average of 1,009,000 bbls. Compared with a year ago, these data indicate a gain in motor fuel demand of slightly more than 1 per cent. Exports of gasoline again increased, totaling nearly 3,000,000 bbls. for the month. Although stocks of finished gasoline increased slightly in November, stocks of natural gasoline declined to a greater extent, with the result that total stocks of motor fuel fell from 53,649,000 bbls. on November 1 to 53,557,000 bbls. on November 30; of the latter, 50,440,000 bbls. was finished gasoline, the remainder natural gasoline.

Important changes in the statistics of the minor products were continued declines in stocks of gas oil and fuel oil, wax and coke. Largely because of seasonal influences, the daily average domestic demand for kerosene increased in November.

According to the Bureau of Labor statistics, the price index for petroleum products during November, 1933, was 51.6, compared with 52.7 in October, 1933, and 48.2 in November, 1932.

The refinery data of this report were compiled from refineries with an aggregate daily recorded crude oil capacity of 3,516,073 bbls. These refineries operated during November at 65 per cent of their capacity, given above, compared with a ratio of 69 per cent in October.

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THE OIL AND GAS JOURNAL

PRODUCING REFINING NATURAL GASOLINE PIPE LINE

Published Weekly by

THE PETROLEUM PUBLISHING COMPANY

114-16 West Second Street, Tulsa, Oklahoma

P. C. LAUINGER, President
JOHN M. EGAN, General Manager
JAMES McINTYRE, Editor
ANDREW M. ROWLEY, Managing Editor
W. T. ANDERSON, Associate Editor
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Established 1910 by PATRICK C. BOYLE

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Member, Audit Bureau of Circulations

Unfounded Complaints

The oil industry should have no difficulty answering the complaint regarding petroleum prices filed with the Consumers Advisory Board of the National Recovery Administration. There is not a particle of fact behind any one of the allegations filed.

It is asserted that "the rise in gasoline prices has outstripped other retail prices and income figures."

It has been shown repeatedly by government reports that gasoline prices are and have been for many years below all commodities.

The Department of Labor index for November, the latest issued, shows petroleum products at 51.6 against 71.1 for all commodities and 56.6 for farm products which have been winning so much sympathy for the farmer.

But who hears any Senator or Congressman pleading for relief of the oil industry? On the contrary, as soon as an effort is made to put the oil industry on its feet there is immediately a howl from the self-appointed champions of the consumer who does not know he is being oppressed.

If the consumer felt he was paying too much for gasoline he surely would have been less complacent in allowing legislators, state and federal, to raise the price by adding taxation.

Every time he paid for three gallons he got only two gallons in his tank, the money for the third gallon going to the tax collector.

Yet they say the oil industry is getting too much for gasoline when the price is so low it bears this additional tax burden.

The complaint further asserts that "much of the industry is now on a profitable basis; but absence of profit should be viewed in the light of the fact that the industry's costs of production are excessive."

Losses due to wasteful overproduction and price cutting are exactly what the petroleum code is designed to correct. The consumer is directly interested in stabilizing the industry to eradicate wasteful methods.

The assertion that "the consumers' annual bill for petroleum products has increased seven times as much as the industry's annual wage bill" is a resounding mouthful but what does it mean, even if it were true?

Scientific advance in indicating potential oil sources, engineering progress in producing and refining oil have not been dependent upon additions to the wage roll. On the other hand, greater operating costs, improved and more costly equipment, necessary expansions and replacements, as well as continually increasing taxation, have vastly increased the total expenditures of the industry.

One other allegation in the bill of complaint simply is not so. It says "the rise in the stocks of petroleum and its products indicate that the price increase has been great enough to threaten the failure of the program of production control."

There has been no rise in total oil stocks. They are lower today than they were before the code was instituted. As a matter of record crude stocks were highest when crude prices were lowest.

But this is of the same pattern as the other allegations in the complaint, full of sound but empty of fact.

A Raid on Motorists

Governor Harry Moore will ask the New Jersey legislature to divert $15,000,000 of motor vehicle license and gasoline tax receipts to aid municipalities now financially embarassed by reason of inability to collect levies on real estate.

This is the boldest tax raid on motorists yet attempted. Car owners who were induced to accept the original gasoline tax as a means of getting improved highways have long since seen their money diverted to fish ponds, docks and wharves, schools and general expenses and, during the depression, to supply the bulk of state unemployment relief, but this New Jersey proposal is a plain scheme to compel the man who owns a car or truck to pay the tax bill of the man who owns real estate.

If New Jersey cannot collect its taxes from one class of citizens it should not arbitrarily transfer the burden to another class just because that class has been easy to pluck in the past.

That is all there is to this readiness to add a cent or two to the gasoline tax—because it is easily collected and so far without arousing popular revolt.

Possibly that is why there is this recurrent agitation by politicians about the price of gasoline—they try to divert public attention from the taxes they add by attacking the oil industry.

The recent example of the Federal government in reducing the Federal tax a half cent—thereby saving motor owners $75,000,000 a year—ought to set people thinking.

Here was a case where a reduction in the tax on gasoline was enjoyed immediately by motorists everywhere. Already they are asking Congress how long that other one cent Federal tax is to remain.

From taking it up with Congress to taking it up with their state legislators should be a quick and natural step for the taxpayers.

Everybody is complaining about the increasing weight of taxation. Here is a burden of over $700,000,000 in the past year that has been lightened by $75,000,000.

There is a tax that is out of all proportion to the cost of the product taxed. Because it is easy to collect it is being used for purposes other than intended, purposes that the politicians would not dare ask the general taxpayer to pay additional taxes for, thus encouraging official extravagance.

The diversion of revenue from the gasoline tax to other than road purposes is a confession that too much taxation is being collected for highway uses.

Taxes for other purposes should be levied generally, not on one class of citizens who already pay their share of general taxes.

The Senate Committee on Finance has already recommended that the remaining one cent Federal tax on gasoline end as scheduled on June 30. The House Ways and Means Committee has been asked to follow suit and the more pressure motor owners can bring to bear on their representatives in Congress the better.

Official statements that taxes cannot be reduced are no answer to this flagrant overtaxation of one section of the citizenship.

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and

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as

President

Effective

January 9, 1934

Forecasters of Dull Market in Group 3 Territory Have Opportunity to Say "I Told You So"

By T. F. SMILEY

Most of the refined oil market observers in the Oklahoma (Group 3) territory found themselves in one of two camps this week. In one camp were those who more or less openly expressed disappointment over the inactivity in both refinery and natural gasoline and the falling prices quoted. In the other were those who politely refrained from saying "I told you so," but who by divers pointed observations let it be clear to the rest of the world that anybody with a bit of the gift of prophecy should have foreseen the futility of looking for a January rise this year.

In normal times December 20 usually sees a smart pickup in orders for gasoline to be shipped after January 1. Three months ago there seemed to be little reason for supposing the market would not move according to precedent, and there was general expectancy that late December would be marked by the customary active buying.

Developments of subsequent weeks, however, revealed with increasing clearness that any extra business appearing at the year's end would be of negligible volume. To begin with, there was the uncertainty concerning what form of price control, if any at all, might be put into effect. A conviction that the price-adjustment order issued by Secretary Ickes as oil administrator on October 16 never would be enforced was gaining ground when a sharp reminder from Mr. Ickes resulted in representatives of the oil industry submitting to him a counter proposition in the form of two agreements. One of these agreements looks to the setting up of an agency inside the industry for the purchase of distress stocks of gasoline and the other prescribes regulations designed to curb demoralizing marketing practices. These agreements have not been acted upon yet by Secretary Ickes and speculation regarding his course has had the effect of a brake on trading.

Refined Oil Market Barometer

Dullness characterizes most divisions of the refined oil market, save in California, where in sharp contrast with trends in other areas, all grades of refinery gasoline were marked up 1 cent. Upturn in prices and in volume of buying expected to appear with the advent of the new year failed to materialize in most districts. Unusual strength developed in cylinder oils, bright stocks and neutrals made from Pennsylvania oils. Weakness in refinery and natural gasolines ascribed to uncertainties still hanging over the market and to continued production beyond consumer needs.

Mid-Continent—General market lifeless. Gasoline prices sag. Lubricants strong.

East Coast—Gasoline spot trading unimproved, though prices hold fairly well. Gas oils and furnace oil distillates firm.

Gulf Coast—No price changes in gasoline, kerosene, and most other products, but kerosene showing stronger tendency.

Pennsylvania—Heavy demand for lubricants pushes up prices. Increased demand from foreign markets for Pennsylvania Grade products.

California—Gasoline buoyant. Gas oils and Diesels slightly higher. Kerosene unchanged.

Chicago—Spot gasoline prices reach new lows for current decline, but consumption holding up well. Burning oils easier.

Other Factors Too

Then there was the half-cent Federal gasoline tax which was to be dropped January 1 and which nobody wanted to pay unless sure that he could pass it on to the next in the line of buyers. And that meant that jobbers wanted their tanks empty on December 31. To be sure it looked for a little while as though jobbers might be able to buy at bargain prices in the early winter with likelihood of selling in January at figures which would absorb the half-cent tax and still yield a comfortable profit. But that dream soon faded.

Another deterrent to large-scale buying was litigation, still pending, involving the validity of the national petroleum code.

The combined effect of these and other considerations blighted whatever prospects there may have been of year-end activity in gasoline. Many, however, clung to the belief that with the turn of the year a lively market would develop. A few—and most of these previously had declared their inability to see any reason for expecting a late December pickup—withheld their enthusiasm and coldly predicted there would be no upswing in January buying.

Producing More Than Needed

The continued market dullness which these conservatives predicted was not ascribed to uncertainty concerning what Secretary Ickes might do or concerning the outcome of court litigation. It was based on the allegation that refineries were producing more gasoline than was needed and that they were still doing it. There was no reason, these minority analysts said, to suppose the public was consuming less motor fuel. On the contrary, available statistics indicated it was consuming more. But for one reason or another, and all of them poor ones, refiners had been making too much gasoline and there would be no use talking about a lively market until consumption had a chance to catch up with supply.

The returns are in. The prophets who declared the lifeless buying would carry over into the new year are getting whatever satisfaction there may be in hitting it right. They are not painting a dark future. Their outlook is fairly cheerful. They merely contend that certain conditions in the business of refining and marketing oil products must be rectified before healthy buying can be looked for.

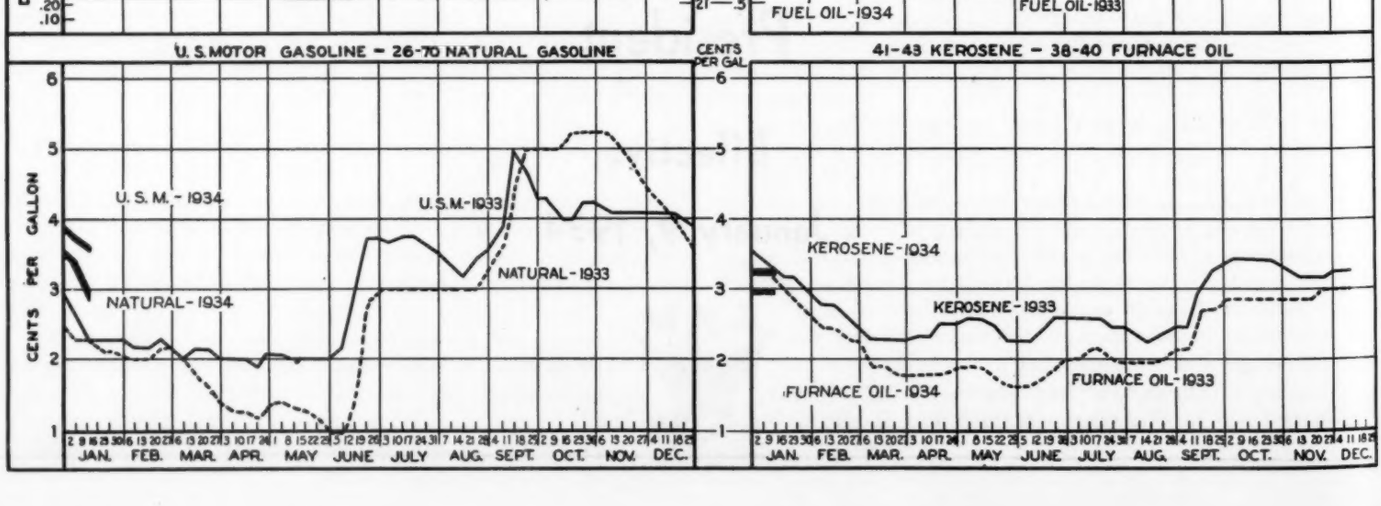
The first few days of the new year witnessed a slight expansion in the movement of gasoline. For the most part this was confined to the larger refiners, whose shipments, some of them big ones, were for replenishing contract inventories. But the refiner who looks to spot selling for his business saw nothing to arouse his enthusiasm. There were few orders, or none at all, and prices, which he had expected to see going upward, were sinking to new low levels.

Another Lesson From East Texas

East Texas demonstrated anew that a relatively small quantity of distress gasoline (and distress gasoline can accumulate in that area with almost incredible swiftness) will disturb the price structure for the small refiner in Oklahoma. Some third-grade material seeking an outlet from the East Texas district was re-

(Continued on Page 29)

Representative Mid-Continent Quotations on Crude Oil and Refined Products Basis Oklahoma (Group 3)



Improvement in Eastern Contract Movement But Activity in Spot Sales Has Not Appeared

By C. O. WILLSON
New York Bureau, The Oil and Gas Journal

NEW YORK, Jan. 8.—The optimistic predictions of late December in regard to improvement in the domestic and export gasoline business with the start of the new year failed to materialize the first week of January which ended today. As explained in these columns last week many of the trade had assumed that with the turn of the year volume of sales would improve due in part to the fact that the one-half cent of the 1½-cent Federal gasoline tax would no longer be effective. It was said that many jobbers reduced their gasoline purchases to a minimum during December in order that they would not have any gasoline on hand January 1 on which the one-half cent tax had been paid.

So far the developments in the motor fuel market have not been along the lines indicated. There has been some improvement in the contract movement of gasoline from the refineries to the bulk stations of company owned and jobber owned facilities but the activity of spot sales around which published quotations center has not made its appearance. In fact developments over the past week point to weakness rather than strength in the gasoline market although all the major sellers are maintaining the quotations on tank car sales which have been effective for several weeks.

Early last week several of the major distributors reduced the retail and tank wagon prices on third grade gasoline at several points from one-half to 1 cent per gallon in the metropolitan area. This grade is sold by the major distributors at points where the competition of smaller jobbers and dealers make it necessary. The prices range from 1 to 2 cents per gallon under the regular or branded grade which contains tetraethyl lead. For several weeks there have been complaints that small sellers of the third grade were offering wider margins to both dealers and consumers. The major companies usually allow the dealers 2 cents on third grade sales.

New Jersey Reduces Gasoline 1.2 Cents

NEW YORK, Jan. 8.—Standard Oil Co., of New Jersey, effective today, made important changes in tank car, tank wagon and service station prices on gasoline in the territory in which it operates. At New York and several other terminal and refining points along the coast the company reduced gasoline tank car prices one-half cent per gallon. The New York prices are now 5 3/4 cents on the middle octane U. S. motor gasoline and 6 cents on the 65 octane and above. The New Jersey company does not quote a third grade under 60 octane but it is assumed that this price will be reduced to 5 1/2 cents by sellers who are active in that market.

It is believed that other major sellers in this territory will make similar reductions although several companies today were continuing the quotations in effect last week.

The Standard of New Jersey also reduced gasoline tank wagon and service station prices 1.2 cents per gallon throughout its territory except at a few points where prices were already below normal. The Standard of Louisiana, a New Jersey marketing subsidiary made reductions which vary from 1/2 cent to 1 cent per gallon in its entire territory.

Retail Gasoline Market

Last week the Sinclair Refining Co. and several of the other large distributors reduced their third grade prices to meet this competition. The Sun Oil Co. reduced the one grade of gasoline that it sells, 1½ cents in Kings, Queens, Suffolk and Nassau Counties. The sales of third grade gasoline in these counties are higher than in the metropolitan area of New York City.

Those in touch with this retail situation fear that the reductions in the third grade gasoline will spread to the regular and premium grades. With the third grade selling as much as 3½ cents per gallon under the regular grade, business in the latter is suffering at many points. Any substantial reduction in the prices for the regular grade of gasoline at service stations no doubt would be reflected in the tank car prices for all three grades of gasoline. At present, the tank car prices for U. S. Motor gasoline under 60 octane in the New York and Philadelphia Harbor areas is 6 cents per gallon, 60-64 octane, 6¼ cents and 65 octane and above 6½ cents. It was stated last week that these prices as posted by the larger sellers were shaded in small sales. In the case of the low octane material quotations as low as 5⅝ cents were reported.

The decline in retail gasoline consumption due to the extremely cold weather over a period of 10 days is said to have brought this retail gasoline market situation to a head. It is charged that certain jobbing organizations in order to increase the sales through stations which had been reduced due to weather conditions, offered additional price concessions.

At this writing it was not known just what the next move on the part of the larger sellers would be. Those who favor the buying agency plan approved by the Planning and Co-ordination Committee at Washington and now under consideration by government officials, point to the situation in this territory as indicating the necessity of its immediate application.

It is claimed that the distress situation now existing in the wholesale and retail gasoline markets is entirely due to a relatively small quantity of gasoline shipped from the Gulf Coast terminals to independent jobbers in this section. It is contended that if this material was removed by the buying agency the root of the trouble would be eliminated and prices would be firm.

Other Products

Among the other products of the eastern markets, residual fuels, gas oils and furnace oil distillates are generally considered strong. Late December and early January deliveries of furnace oils probably established a record for this section, according to those in touch with the market. There have been rumors to the effect that prices on all these products would be advanced early this month but confirmation has not been obtainable from the important factors in these products. Some claim that while sales to consumers of all grades of fuels have been heavy over the past two weeks, supplies at refineries and bulk terminals are adequate and there is no justification for higher prices. The bunker C fuel price continues at $1.20 in the New York harbor with 28 plus gas oil at $1.95 per barrel. Prices on the furnace oils range from 4½ to 5½ cents per gallon with the industrial fuel oil selling at 4 cents in tank car lots.

The demand for kerosene has been steady with prices unchanged at 5¼ to 5½ cents. The trade generally is optimistic in regard to kerosene but there

(Continued on Page 38)

American Petroleum Institute Weekly Refinery Statistics

Figures below reported for week by American Petroleum Institute. (1) Per cent refinery capacity represented. (2) Daily average crude runs to stills. (3) Total motor fuel stocks. (4) Gas oil and fuel oil stocks. All figures in 42-gallon barrels.

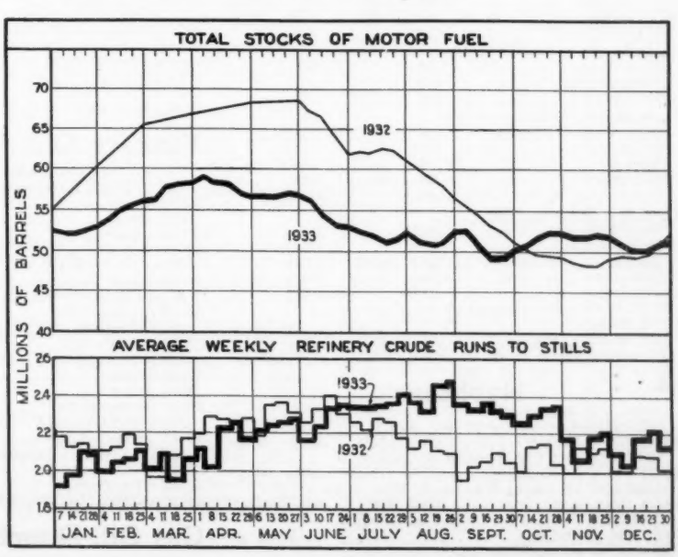
Week Ending January 6, 1934, Compared to Week Ago

	Week Ending Jan. 6, 1934				Week Ending Dec. 30, 1933			
	(1)	(2)	(3)	(4)	(1)	(2)	(3)	(4)
East Coast	100.0	429,000	13,772,000	6,294,000	100.0	478,000	14,650,000	6,602,000
Appalachian	92.6	64,000	1,893,000	948,000	92.6	74,000	2,058,000	1,097,000
Ind., Ill., Ky.	97.6	250,000	7,149,000	4,232,000	97.3	269,000	7,094,000	4,303,000
Okla., Kans., Mo.	82.1	176,000	5,480,000	3,588,000	82.1	189,000	5,680,000	3,680,000
Inland Texas	60.2	76,000	1,193,000	1,667,000	60.2	72,000	1,248,000	1,729,000
Texas Gulf	98.1	428,000	5,298,000	5,818,000	98.1	440,000	4,802,000	6,121,000
La. Gulf	100.0	107,000	1,557,000	1,862,000	100.0	125,000	1,370,000	1,794,000
N. La. and Ark.	92.6	36,000	184,000	501,000	92.6	40,000	226,000	517,000
Rocky Mtn.	78.8	25,000	890,000	705,000	78.8	24,000	884,000	710,000
California	96.9	382,000	13,190,000	91,548,000	96.9	423,000	13,568,000	91,275,000
Total U. S.	92.4	1,973,000	50,606,000	117,163,000	92.4	2,134,000	51,580,000	117,828,000

(Estimates on total motor fuel stocks, Bureau of Mines basis, temporarily discontinued)

Week Ending January 6, 1934, Compared to Year Ago

	Week Ending Jan. 6, 1934				Week ending January 7, 1933			
	(1)	(2)	(3)	(4)	(1)	(2)	(3)	(4)
East Coast	100.0	429,000	13,772,000	6,294,000	99.1	409,000	12,723,000	7,936,000
Appalachian	92.6	64,000	1,893,000	948,000	96.0	78,000	1,740,000	810,000
Ind., Ill., Ky.	97.6	250,000	7,149,000	4,232,000	97.5	262,000	7,040,000	3,341,000
Okla., Kans., Mo.	82.1	176,000	5,480,000	3,588,000	84.9	175,000	4,687,000	2,725,000
Inland Texas	60.2	76,000	1,193,000	1,667,000	56.4	94,000	1,490,000	2,151,000
Texas Gulf	98.1	428,000	5,298,000	5,818,000	97.7	375,000	6,350,000	7,441,000
La. Gulf	100.0	107,000	1,557,000	1,862,000	97.3	75,000	1,446,000	2,583,000
N. La. and Ark.	92.6	36,000	184,000	501,000	88.5	40,000	313,000	449,000
Rocky Mtn.	78.8	25,000	890,000	705,000	90.8	22,000	1,131,000	465,000
California	96.9	382,000	13,190,000	91,548,000	94.6	413,000	15,326,000	99,792,000
Total U. S.	92.4	1,973,000	50,606,000	117,163,000	91.6	1,933,000	52,249,000	127,693,000



Data based on weekly reports of American Petroleum Institute. Figures for week just ended not shown in graph but are included in accompanying table.

REFINERY AND CRUDE PRICES

Quotations on refined products are for interstate or export movement except as otherwise noted

The following quotations are exclusive of the Federal excise taxes of 1 cent a gallon on gasoline and 4 cents on lubricating oils.

Refinery Gasolines

OKLAHOMA (Group 3)—	Jan. 9		Jan. 2	
U. S. Motor grades:				
Below 60 octane	.03⅝	.03⅞	.03¾	.03⅞
60-64.9 octane	.04⅜	.04¾	.04½	.04¾
65-69.9 octane	.04¾	.05¼	.05	.05¼
70 octane and higher	.05¼	.05½	.05¼	.05½
60-62 400 grades:				
Below 60 octane	.03⅞	.04	.03⅞	.04
60-64.9 octane	.04⅝	.05⅛	.04⅝	.05⅛
65-69.9 octane	.05¼	.05⅜	.05¼	.05⅜
70 octane and higher	.05½	.05¾	.05½	.05¾
64-66 375	.04⅞	.04⅝	.04½	.04¾
68-70 360	.05	.05¼	.05⅛	.05¼
NORTH TEXAS—				
U. S. Motor grades:				
Below 60 octane	.03⅝	.03¾	.03⅞	.04
60-64.9 octane	.04⅜	.04¾	.04½	.04⅞
65-69.9 octane	.05	.05¼	.05⅛	.05⅜
70 octane and higher	.05⅜	.05⅝	.05⅜	.05⅝
60-62 400	.03⅞		.03⅞	
64-66 375	.04½		.04⅝	
64-66 360	.05	.05½	.05	.05½
NORTH LOUISIANA (Ark., No. La. & Miss. del.)—				
U. S. Motor grades:				
Below 60 octane	.04¼		.04½	
60-64.9 octane	.05¼		.05½	
65-69.9 octane	.05¾		.06	
70 octane and higher	.06¼		.06¼	
60-62 400	.04⅜		.04½	
ARKANSAS (Ark., No. La. & Miss. del.)—				
U. S. Motor grades:				
Below 60 octane	.04¼		.04½	
60-64.9 octane	.05¼		.05½	
65-69.9 octane	.05¾		.06	
70 octane and higher	.06¼		.06¼	
CHICAGO (based on Oklahoma Group 3)—				
U. S. Motor grades:				
Below 60 octane	.03⅝	.04	.03⅞	.04⅛
60-64.9 octane	.04½	.04¾	.04⅝	.04⅞
65-69.9 octane	.04⅞	.05¼	.05	.05¼
70 octane and higher	.05¼	.05½	.05¼	.05½
60-62 400	.03¾	.04	.04	.04¼
64-66 375	.04¾	.05	.04⅞	.05
68-70 360	.05	.05⅛	.05⅛	.05¼
Aviation fighting grade	.05⅜	.05¾	.05½	.05¾
PENNSYLVANIA (inland refineries)—				
58-60 U. S. Motor:				
Below 60 octane	.05⅛	.05¼	.05¼	
60-64.9 octane	.06⅜		.06⅜	
65-69.9 octane	.06½		.06½	
70 octane and higher	.07⅛		.07⅛	
64-66 375	.06⅛		.06⅛	
68-70 350	.06¼	.06½	.06¼	.06½
CALIFORNIA (domestic movement)—				
54-58 U. S. Motor	.08	.09	.07	.08¾
58-60 400	.08¾	.09¾	.07¾	.09½
EAST COAST—				
U. S. Motor, below 60 octane:				
New York	.06		.06	
Philadelphia	.06		.06	
Baltimore	.06		.06	
U. S. Motor, 60-64 octane:				
New York (Bayonne)	.06¼		.06¼	
Philadelphia	.06¼		.06¼	
Boston	.06¼	.06½	.0640	
Baltimore	.06	.06¼	.06¼	
Charleston, S. C.	.06¼		.06¼	
U. S. Motor, 65 and above:				
New York (Bayonne)	.06½		.06½	
Philadelphia	.06½		.06½	
Boston	.06½	.06¾	.0670	
Baltimore	.06¼	.06½	.06½	
Charleston, S. C.	.06½		.06½	
GULF COAST (domestic)—				
U. S. Motor:				
Below 65 octane	.04¼	.04½	.04¼	.04½
65 octane and higher	.05¼	.05½	.05¼	.05½

Naphthas

OKLAHOMA (Group 3)—	Jan. 9		Jan. 2	
50-52 450 (blending)	.04⅛	.04¼	.04⅛	.04¼
PENNSYLVANIA (inland refineries)—				
50-54 430-450 (blending)	.05⅜	.05½	.05⅜	.05½
ARKANSAS (Ark., No. La. & Miss. del.)—				
48-50 (blending)	.04½	.04¾	.04½	.04¾
CHICAGO (based on Oklahoma Group 3)—				
50-52 450 (blending)	.04	.04½	.04⅛	.04½
Cleaners' naphtha, 56-58 gr., 200 i.b.p.-320 e.p.	.06¾	.07	.06¾	.07¼
Lacquer diluent, 180 i.b.p.-250 e.p.	.07¾	.08	.07¾	.08¼
Lacquer diluent, 140 i.b.p.-200 e.p.	.08¾	.09	.08¾	.09¼
Rubber solvent, 68-70 gr., 100 i.b.p.-300 e.p.	.06¾	.07	.06¾	.07¼
Stoddard solvent, 300 i.b.p.-410 e.p., over 83° flash	.06¼	.07	.06¼	.06⅝
Pet. thinner, 290-300 i.b.p.-415 e.p., over 83° flash	.06¼	.06½	.06¼	.06½
V.M.&P. naphtha, 56-58 gr., 190-200 i.b.p.-330 e.p.	.06¾	.07	.06¾	.07
Petroleum spirits	.05¾	.06	.05¾	.06¼

Natural Gasolines

OKLAHOMA (Group 3)—	Jan. 9		Jan. 2	
Grade 26-70	.03	.03⅛	.03⅜	
Grade 18-55	.03¾	.03⅞	.04⅛	.04¼
Low vapor pressure grades:				
15 lb. v.p. (max.)	.04¼		.04½	.04⅝
11 lb. v.p. (max.)	.04¾		.05	.05¼
NORTH TEXAS—				
Grade 26-70	.02⅞	.03	.03¼	
Grade 18-55	.03¾		.04	.04⅛
Low vapor pressure grades:				
15 lb. v.p. (max.)	.04	.04¼	.04⅜	.04½
11 lb. v.p. (max.)	.04½	.04¾	.05	.05⅛
NORTH LOUISIANA—				
Grade 26-70	.03¼	.03⅜	.03¾	
CALIFORNIA—				
75-85 375	.05½	.06¼	.05½	.06¼

Kerosenes

(All kerosenes water white)

OKLAHOMA (Group 3)—	Jan. 9		Jan. 2	
41-43	.03¼	.03½	.03¼	.03½
42-44	.03½	.03⅝	.03½	.03⅝
NORTH TEXAS—				
40-41	.03⅛	.03¼	.03⅛	.03¼
41-43	.03¼	.03⅜	.03¼	.03⅜
NORTH LOUISIANA (Ark., No. La. & Miss. del.)—				
41-43	.03¾		.03¾	
42-44	.04		.04	
ARKANSAS (Ark., No. La. & Miss. del.)—				
41-43	.03¾		.03¾	
PENNSYLVANIA (inland refineries)—				
45	.05⅝		.04½	
46	.05⅞		.04¾	
47	.06		.05	
CHICAGO (based on Oklahoma Group 3)—				
41-43	.03¼	.03½	.03¼	.03½
42-44	.03⅜	.03½	.03⅜	.03½
CALIFORNIA (Pacific Coast consumption)—				
38-40 high burning test	.04¼	.04¾	.04¼	.04¾
NEW YORK (Bayonne, N. J.)—				
41-43	.05¼	.05½	.05½	
GULF COAST (domestic)—				
41-43	.04½	.04⅝	.04½	

Petroleum Coke

Prices per ton f.o.b. refineries in Chicago area. (Refineries will absorb freight to 80 cents a ton)

	Jan. 9	Jan. 2
Breeze (screenings)	5.50	5.50
Pile run	5.50	5.50
Direct from still	6.50	6.50
Lump and egg	8.00	8.00

Furnace Oils and Tractor Fuels

(Zero cold test under 190° flash and good odor)

OKLAHOMA (Group 3)—	Jan. 9		Jan. 2	
32-36 straw	.03	.03⅛	.03	.03⅛
36-38 straw	.02⅞	.03	.02⅞	.03
38-40 straw	.03	.03⅛	.03	.03⅛
39-41 prime	.03⅛	.03¼	.03⅛	.03¼
NORTH TEXAS—				
38-40 straw	.02⅞	.03	.02⅞	.03
NORTH LOUISIANA (Ark., No. La. & Miss. del.)—				
36-40 furnace oil	.03		.03	
ARKANSAS (Ark., No. La. & Miss. del.)—				
32-36 furnace oil	.03⅛		.03⅛	
CHICAGO (based on Oklahoma Group 3)—				
32-36 straw	.03⅛	.03⅜	.03¼	.03⅜
38-40 straw	.03⅛	.03¼	.03⅛	.03⅜
38-40 prime white	.03¼	.03⅜	.03¼	.03½
PENNSYLVANIA (inland refineries)—				
40-41 prime white	.03⅛	.03¼	.03⅛	.03¼
NEW YORK (Bayonne)—				
36-40 (No. 1 grade)	.05¼	.05½	.05½	
32-36 (No. 2 grade)	.04½		.04½	
21 industrial (No. 4 grade)	.04		.04	

Gas Oil, Diesel Oil and Fuel Oil

(Gas oil per gal.; Diesel and fuel oils per bbl.)

OKLAHOMA (Group 3)—	Jan. 9		Jan. 2	
32-36 gas oil cracking stock	.01⅞	.02⅛	.01⅞	.02⅛
U.G.I. gas oil	.02⅛		.02⅛	
32-36, zero to 15 gas oil	.02⅞	.03	.02⅞	.03
28-30, No. 3 burner oil	1.05	1.10	1.05	1.10
28-30, zero to 10 fuel oil	.95	1.00	.95	1.00
26-30, zero to 10 fuel oil	.85	.95	.85	.95
24-26 fuel oil	.65	.70	.65	.70
20-22 fuel oil	.55	.60	.55	.60
Below 16 fuel oil	.55	.60	.50	.55
NORTH TEXAS—				
32-36 gas oil, industrial	.02		.02	
22-26 fuel oil	.57½	.62½	.57½	.62½
Below 20 fuel oil	.47½	.50	.47½	.50
NORTH LOUISIANA (Ark., No. La. & Miss. del.)—				
32-36 gas oil, zero	.03		.03	
14-16 fuel oil	.65	.70	.65	.70
ARKANSAS (Ark., No. La. & Miss. del.)—				
30-32 gas oil, zero	.02¾		.02¾	
32-36 gas oil	.03		.03	
14-16 fuel oil	.65	.70	.65	.70
CHICAGO (based on Oklahoma Group 3)—				
32-36 gas oil, industrial	.01⅞	.02	.01⅞	.02
28-30 zero to 10, fuel oil	.95	1.07½	.95	1.05
26-28 zero to 10, fuel oil	.82½	.87½	.80	.85
22-26 zero to 10, fuel oil	.72½	.77½	.60	.65
18-22 zero to 10, fuel oil	.60	.65	.60	.65
Below 18 fuel oil	.40	.45	.40	.45

Note: Fuel oils of more than 40 cold test generally 5 to 15 cents per barrel less in all these areas.

PENNSYLVANIA (inland refineries)—				
36-40	.04	.04¼	.04	.04¼
CALIFORNIA—				
30-34 gas oil per bbl.	1.00	1.15	1.00	1.07
27 plus Diesel	1.00	1.15	1.00	1.07
15-19 bunker (at tidewater)	.60	.70	.60	.70
15-19 (cargo lots)	.55	.65	.55	.65
15-19 (tank cars)	.45	.65	.45	.65
GULF COAST—				
28-30 gas oil	.03¾		.03¾	
28-30 Diesel (bunkers)	1.80		1.80	
Bunker C (bulk cargoes)	.92½	.95	.92½	.95
Bunker C (bunkers)	1.05		1.05	
NEW YORK (Bayonne)—				
28 plus, gas oil	.04	.04¼	.04	.04¼
28-30 Diesel (lighterage 6½ cents per bbl.)	1.95		1.95	
28-30 Diesel (tank cars)	.04½		.04½	
*Bunker C (to ocean-going ships in N. Y. harbor)	1.20		1.20	

*Lighterage charge 5 cents per barrel additional.

Neutral Oils

(Vis. at 100° F. except Pennsylvania, and color N.P.A.)

OKLAHOMA (Group 3)—	Jan. 9		Jan. 2	
Zero to 10 Cold Test:				
150-3	.07¼	.07½	.07¼	.07½
180-3	.08½	.08¾	.08½	.08¾
180-4	.08¼	.08½	.08¼	.08½
200-3	.09	.09¼	.09	.09¼
200-4	.08¾	.09	.08¾	.09
240-3	.11	.11¼	.11	.11¼
240-4	.10¾	.11	.10¾	.11
280-3	.12	.12¼	.12	.12¼
280-4	.11½	.11¾	.11½	.11¾
300-3½	.12¾	.13	.12¾	.13
350-3½	.13¾	.14	.13¾	.14
400-4	.14¾	.15	.14¾	.15
500-4½	.15¾	.16	.15¾	.16
100-2 paraffin oil	.05	.05¼	.05	.05¼
15-30 Cold Test:				
200-3	.08	.08¼	.08	.08¼
200-4	.07¾	.08	.07¾	.08
240-3	.10	.10¼	.10	.10¼
240-4	.09¾	.10	.09¾	.10
280-3	.11	.11¼	.11	.11¼
280-4	.10¾	.11	.10¾	.11
GULF COAST—				
Pale Oils:				
200-3	.06¼	.06½	.06¼	.06½
300-3	.07	.07½	.07	.07½
500-3½	.08		.08	
750-3½	.08½	.09	.08½	.09
1,200-3½	.09½		.09½	
2,000-4	.10¼	.10½	.10¼	.10½
Red Oils:				
200-5-6	.05½		.05½	
300-5-6	.06	.06½	.06	.06½
500-5-6	.06¾	.07¼	.06¾	.07¼
750	.07½	.08	.07½	.08
1,200-5-6	.08¼	.08¾	.08¼	.08¾
2,000 6 plus	.09½	.09¾	.09½	.09¾
CALIFORNIA—				
Pale Oils:				
100-2½-3	.23	.25	.23	.25

200-2½-3	.23	.25	.23	.25
300-3-3½	.23	.25	.23	.25
350-3-4	.23	.25	.23	.25
400-3-4	.23	.25	.23	.25
450-3-4	.23	.25	.23	.25
550-3-4	.23	.25	.23	.25
600-3-4	.23	.25	.23	.25
Red Oils:				
200-4-5	.23	.25	.23	.25
300-5-6	.23	.25	.23	.25
350-5-6	.23	.25	.23	.25
400-5-6	.23	.25	.23	.25
450-5-6	.23	.25	.23	.25
500-5-6	.23	.25	.23	.25
600-5-6½	.23	.25	.23	.25
700-6½ plus	.23	.25	.23	.25
750-6½ plus	.23	.25	.23	.25
900-6½ plus	.23	.25	.23	.25
PENNSYLVANIA—				
150 vis. at 70° F., 3 color;	400-405 flash:			
Zero pour test	.22½	.22¾	.21½	.21¾
10 pour test	.21¾	.22	.20¾	.21
15 pour test	.20¾	.21	.19¾	.20
25 pour test	.20	.20¼	.19	.19¼
180 vis. at 70° F., 3 color;				
25 pour test	.23	.23¼	.22	.22¼
200 vis. at 70° F., 3 color:				
Zero pour test	.28¼	.28½	.27¼	.27½
10 pour test	.27	.27¼	.26	.26¼
15 pour test	.26	.26¼	.25	.25¼
25 pour test	.25¼	.25¾	.24½	.24¾

Bright and Steam Refined Stocks

OKLAHOMA (Group 3)—	Jan. 9		Jan. 2	
630 light green	.11	.14	.11	.14
600 light green S.R.	.07	.09	.07	.09
600 dark green S.R.	.05	.07	.05	.07
Bright Stocks:				
190-200 D	.24	.25	.24	.25
150-160 D, 0-10	.22¼	.22½	.22¼	.22½
150-160 D, 10-25	.21¾		.21¾	
150-160 D, 25-40	.21¼		.21¼	
150-160 E	.21¼		.21¼	
PENNSYLVANIA—				
600 S.R.	.16		.15½	
650 S.R.	.18½	.19	.18	.18½
600 Pennsylvania flash	.18½	.19	.18	.18½
630 flash	.24¼	.24½		
600 Warren E filtered	.19¾		.19¼	
Pennsylvania Grade bright stock:				
No. 8 color, 145-50 at 210; 540-550 flash:				
10 pour test	.27½		.27½	
15 pour test	.26	.26½	.26	.26½
25 pour test	.25¼	.25¾	.25¼	.25¾

Wax and Petrolatum

(Prices per pound)

OKLAHOMA (Group 3)—	Jan. 9		Jan. 2	
124-126 white crude scale	.03¾	.03⅞	.03¾	
PENNSYLVANIA—				
122-124	.0410	.0415	.0410	.0415
124-126	.0415	.0420	.0415	.0420
NEW YORK HARBOR—				
Wax (a.m.p.) in bags:				
124-126	.03⅞	.04	.03⅞	.04
120-122	.0430		.0430	
123-125	.0445		.0445	
125-127	.0455		.0455	
130-132	.0495		.0495	
133-135	.0555		.0555	
135-137	.0580		.0580	
Petrolatum in barrels in carload lots:				
Dark green	.01⅞	.02	.01⅞	.02
Amber	.02⅞	.03	.02⅞	.03
Extra amber	.03⅛	.03¼	.03⅛	.03¼
Lily white	.06¾	.06⅞	.06¾	.06⅞
Snow white	.07¾	.07⅞	.07¾	.07⅞
Cream	.05⅝	.05¾	.05⅝	.05¾
CHICAGO (f.o.b. switching district)*—				
122-124 wax	.0465	.0475	.0465	.0475
125-127 wax	.0490	.0500	.0490	.0500
127-129 wax	.0505	.0515	.0505	.0515
130-132 wax	.0565	.0575	.0565	.0575
132-134 wax	.0590	.0600	.0590	.0600

*Cents per pound on carlot orders in burlap bags of 225 lbs. approx. Add 3° F., a.m.p.

Export Prices

GASOLINE

GULF COAST—	Jan. 9		Jan. 2	
U. S. Motor	.05¼	.05⅜	.05¼	.05⅜
60-62 400	.05½		.05½	
61-63 390	.05⅝		.05⅝	
64-66 375	.05¾		.05¾	
LOS ANGELES, CALIF.—				
U. S. Motor grades:				
53-55 octane	.04½	.04¾	.04½	.04¾
55-65 octane	.04¾	.05	.04¾	.05
65-67 octane	.05	.05¼	.05	.05¼
67-69 octane	.05¼	.06	.05¼	.06
Above 69 octane	.06¼	.07	.06¼	.07
58-60 400 endpoint	.05	.06	.05	.06

KEROSENE

GULF COAST—				
41-43 prime white	.04¼		.04¼	
41-43 water white	.04⅜		.04⅜	
44 water white	.04½	.04⅝	.04½	.04⅝
LOS ANGELES, CALIF.—				
41-43 water white	.03½	.04	.03¾	.04¼

LUBRICANTS

NEW YORK (f.a.s. in bbls.)—				
Cylinder Stocks:				
600 Warren E	.25	.26	.25	.26
600 S.R. unfiltered	.21½	.22½	.22	.23
650 S.R. unfiltered	.24½	.25½	.24½	.25½
600 flash S.R.	.25½	.26	.25½	.26
630 flash S.R.	.29½	.30½	.29½	.30½
Bright stock, 8 color	.31	.32	.31½	.32½
Bright stock, 6½ color, dil.	.30	.31	.30½	.31½

NEUTRAL OILS

300-3 color	.29	.30	.29	.30
150-3 color	.25	.26	.25	.26

PARAFFIN WAX (Fully Refined)

NEW YORK (prices per pound)—				
120-122 a.m.p.	.04¼	.04⅜	.04¼	
123-125 a.m.p.	.04⅜	.04½	.04⅜	
125-127 a.m.p.	.04½	.04⅝	.04½	
130-132 a.m.p.	.05	.05⅛	.05	
133-135 a.m.p.	.05½	.05⅝	.05½	
135-137 a.m.p.	.05¾	.05⅞	.05¾	

Crude Oil Gravity Table

Degrees gravity—	1 Oklahoma and Kansas	2 North Texas, Central Texas & East Central Texas	3 North Louisiana and Arkansas	4 Gray County, Texas	5 Carson, Hutchinson and Moore Counties, Texas	6 Conroe, Texas	7 Salt Creek, Wyo.	8 Gulf Coast, Texas and Louisiana	9 Gulf Coast, Texas and Louisiana	10 Caddo, Louisiana	11 Sabine-De Soto, Louisiana	12 Homer, Louisiana	13 Sarepta-Carterville, Louisiana	14 El Dorado, Arkansas	15 Haynesville, Louisiana	16 Miller County, Arkansas	17 Cotton Valley, Louisiana
Below 20	....	....	....	....	....	....	....	$.82	$.82	....	....	....	....	....	....	....	....
20-20.9	....	....	....	....	....	....	....	.84	.84	....	....	....	....	....	....	....	....
21-21.9	....	....	....	....	....	....	....	.86	.86	....	....	....	....	....	....	....	....
22-22.9	....	....	....	....	....	....	....	.88	.88	....	....	....	....	....	....	....	....
23-23.9	....	....	....	....	....	....	....	.90	.90	....	....	....	....	....	....	....	....
24-24.9	....	....	....	....	....	....	....	.92	.92	....	....	....	....	....	....	....	....
Below 25	*$.76	....	....	....	....	....	....	....	....	$.63	$.69	$.71	$.75	$.75	$.65	$.62	$.70
25-25.9	*.78	....	....	....	....	....	....	.94	.94	.65	.71	.73	.77	.77	.67	.64	.72
26-26.9	*.80	....	....	....	....	....	....	.96	.96	.67	.73	.75	.79	.79	.69	.66	.74
27-27.9	*.82	....	....	....	....	....	....	.98	.98	.69	.75	.77	.81	.81	.71	.68	.76
28-28.9	*.84	....	....	....	....	....	....	1.00	1.00	.71	.77	.79	.83	.83	.73	.70	.78
Below 29	.84	$.79	0.79	....	....	....	$.84	....	....	....	....	....	....	....	....	....	....
29-29.9	.86	.81	.81	....	....	....	.86	1.02	1.02	.73	.79	.81	.85	.85	.75	.72	.80
30-30.9	.88	.83	.83	....	....	....	.88	1.04	1.04	.75	.81	.83	.87	.87	.77	.74	.82
31-31.9	.90	.85	.85	....	....	....	.90	1.06	1.06	.77	.83	.85	.89	.89	.79	.76	.84
32-32.9	.92	.87	.87	....	....	....	.92	1.08	1.08	.79	.85	.87	.91	.91	.81	.78	.86
33-33.9	.94	.89	.89	....	....	....	.94	1.10	1.07	.81	.87	.89	.93	.93	.83	.80	.88
34-34.9	.96	.91	.91	....	....	....	.96	1.12	1.08	.83	.89	.91	.95	.95	.85	.82	.90
Below 35	....	....	....	$.79	$.69	....	....	....	....	....	....	....	....	....	....	....	....
35-35.9	.98	.93	.93	.81	.71	$1.09	.98	1.12	1.09	.85	.91	.93	.97	.97	.87	.84	.92
36-36.9	1.00	.95	.95	.83	.73	1.11	1.00	1.12	1.10	.87	.93	.95	.99	.99	.89	.86	.94
37-37.9	1.02	.97	.97	.85	.75	1.13	1.02	1.12	1.11	.89	.95	.97	1.01	1.01	.91	.88	.96
38-38.9	1.04	.99	.99	.87	.77	1.15	1.04	1.12	1.12	.91	.97	.99	1.03	1.03	.93	.90	.98
39-39.9	1.06	1.01	1.01	.89	.79	1.17	1.06	1.12	1.13	.93	.99	1.01	1.05	1.05	.95	.92	1.00
40 and over	1.08	1.03	1.03	.91	.81	1.19	1.08	1.12	1.14	.95	1.01	1.03	1.07	1.07	.97	.94	1.02

*The following companies purchasing crude oil in Kansas or Oklahoma, or both, begin their price schedules: Below 25 degrees, 76 cents; 25-25.9 degrees, 78 cents, with 2 cents added for each degree upward to 40 and over at $1.08: Carter Oil Co., Magnolia Petroleum Co., Pure Oil Co., Rock Island Refining Co., Shell Petroleum Corp., Sinclair Prairie Oil Marketing Co., Skelly Oil Co. and Wilcox Oil & Gas Co. All others begin their schedule at below 29 degrees, 84 cents, excepting Phillex Oil Co., which begins with below 31 degrees at 88 cents.

Column 1—Effective September 29, The Texas Co. in Oklahoma; Stanolind Crude Oil Purchasing Co. in Kansas and Oklahoma; Anderson & Prichard, Inc., in Oklahoma; Bell Oil & Gas Co. in Oklahoma; Carter Oil Co. in Oklahoma and Kansas; Deep Rock Oil Co. in Oklahoma; Derby Oil Co. in Kansas; Globe Refining Co. in Oklahoma; Golden Rule Refining Co. in Kansas; Gypsy Oil Co. in Oklahoma and Kansas; Kanotex Refining Co. in Kansas; Magnolia Petroleum Co. in Oklahoma; Mid-Continent Petroleum Corp. in Oklahoma; National Refining Co. in Kansas and Oklahoma; Shell Petroleum Corp in Kansas and Oklahoma; Sinclair Prairie Oil Marketing Co. in Kansas and Oklahoma; The Texas Co. in Oklahoma; Tide Water Oil Co. in Oklahoma; Vickers Refining Co. in Kansas; Continental Oil Co. in Kansas and Oklahoma; Empire Pipe Line Co. in Oklahoma and Kansas; Phillex Oil Co. in Kansas and Oklahoma; Pure Oil Co. in Oklahoma; Skelly Oil Co. in Kansas. Effective September 29, by White Eagle Oil Corp. in Kansas; on October 1 by Barnsdall Refineries, Inc., in Oklahoma.

Column 2—Effective September 29, by the Texas Co., Stanolind Crude Oil Purchasing Co., Humble Oil & Refining Co., Sinclair Prairie Oil Marketing Co., Gulf Pipe Line Co., Magnolia Petroleum Co., Bell Oil & Gas Co., Continental Oil Co. Effective September 29 in the Van Pool, Van Zandt County, the Pure Oil Co. posted below 29 degrees, 84 cents, with 2 cents added for each degree up to 40 and over at $1.06.

Column 3—Effective September 29 by the Texas Co., Magnolia Petroleum Co., Gulf Refining Co. Effective December 22, Stanolind Oil & Gas Co. in Pine Island, Louisiana, and Marion County, Texas, posted below 29 degrees, 79 cents, with 2 cents added for each degree up to 40 and over at $1.03. For Standard Oil Co. of Louisiana's prices see Columns 10 to 16, inclusive.

Column 4—Effective September 29 by the Texas Co., Humble Oil & Refining Co., Magnolia Petroleum Co., Sinclair Prairie Oil Marketing Co. and H. F. Wilcox Oil & Gas Co. On same day Phillex Oil Co. posted below 31 degrees, 71 cents, with 2 cents added for each degree up to 40 and over at 91 cents.

Column 5—Effective September 29 by the Texas Co., Humble Oil & Refining Co., Gulf Pipe Line Co., Magnolia Petroleum Co., Wilcox Oil & Gas Co., Continental Oil Co. On same day, Phillex Oil Co. posted below 31 degrees, 61 cents, with 2 cents added for each degree upward to 40 and over at 81 cents.

Column 6—Effective September 29 by the Humble Oil & Refining Co. and Tide Water Oil Co., and on September 30 by the Texas Co. which on September 29 had posted a schedule of $1.07 to $1.12, with a 1-cent spread on each degree.

Column 7—Effective September 29 by the Stanolind Oil & Gas Co.

Column 8—Effective September 29 by the Humble Oil & Refining Co., Gulf Pipe Line Co., Shell Petroleum Corp., Pure Oil Co., Sinclair Prairie Oil Marketing Co. On October 2, Magnolia Petroleum Co. posted Lockport, Louisiana: 30-30.9 degrees, 84 cents, with 2 cents added for each degree upward to 34 and over at $1.12, and in Cameron Meadows and Iowa, Louisiana: Below 30 degrees, 72 cents with 2 cents added for each degree up to 34 and over at $1.02. These prices were 2 cents higher on each degree than Magnolia prices posted on September 29. Effective September 29, Shell Petroleum Corp. posted in Iowa, Louisiana, district: Below 30 degrees, 70 cents, with 2 cents added for each degree upward to 34 degrees and over at $1.00; and in Black Bayou and White Castle, Louisiana: Below 30 degrees, 80 cents, with 2 cents added for each degree upward to 34 degrees and over at $1.10.

Column 9—Effective September 30, the Texas Co. (On September 29, the Texas Co. had posted a schedule 2 cents lower on each degree, but changed it on September 30.)

Columns 10, 11, 12, 13, 14, 15, 16—Effective September 29, by the Standard Oil Co. of Louisiana and Louisiana Oil Refining Co.

Column 17—Effective September 29, by the Louisiana Oil Refining Co.

(California Crude Oil Prices on Page 39)

Crude Oil Prices

Oklahoma, Kansas, North Central and East Central Texas

East Texas $1.00
Stratman, Kans. (Sept. 29, 1933) 1.03
Corsicana (heavy) (June 17, 1932)* ..... .80
Other fields ..... (See gravity table)

Note—In East Texas, effective September 29, 1933, by Texas Co., Stanolind Crude Oil Purchasing Co., Humble Oil & Refining Co., Shell Petroleum Corp., Gulf Pipe Line Co., Tide Water Oil Co., Sinclair Prairie Oil Marketing Co., Magnolia Petroleum Co., Sun Oil Co., Panola Pipe Line Co., and Empire Oil & Refining Co.
*Magnolia Petroleum Co.

West Texas

Crane, Upton, Crockett, Howard, Glasscock, Mitchell (Sept. 29, 1933) ..... $.70
Ector, Winkler and Pecos Counties and Lea County, New Mexico (Sept. 29, 1933) ..... .75
Pecos County, Yates shallow pool (Sept. 29, 1933)* ..... .65
Jones and Fisher Counties ..... See gravity table.

Note—Effective September 29, 1933, by Humble Oil & Refining Co., Texas Co., Gulf Pipe Line Co., Shell Petroleum Corp., Magnolia Petroleum Co., and by Stanolind Oil & Gas Co. in Winkler County, Texas.
*Shell Petroleum Corp.

Gulf Coast

Grade A and Grade B specifications discontinued by leading buyers ..... (See gravity table)
Tomball (see note)* $1.15
Livingston (Sept. 29, 1933)† 1.00
Greta (Sept. 29, 1933) ..... .85
Refugio, light ..... (See gravity table)
Refugio, heavy (Sept. 29, 1933)‡ ..... .85
Markham and High Island ..... (See Gulf Coast gravity table)
Conroe ..... (See Conroe gravity table)

Note—Tomball, effective September 29, by Humble Oil & Refining Co., and October 2 by Magnolia Petroleum Co., and November 10 by Stanolind Oil & Gas Co.
*Greta posted by Texas Co. †Shell Petroleum Corp. ‡Refugio heavy, by Humble Oil & Refining Co.

South Central and Southwest Texas

(See note below table)

Darst Creek ..... .87
Mirando ..... .80
Luling (Sept. 29, 1933) ..... .75
Pettus 1.05
Salt Flat ..... .87
Lytton Springs (Sept. 29, 1933) ..... .95
Duval County (Sept. 29, 1933) ..... .80
Saxet ..... .85

Note—Effective on September 29 by Humble Oil & Refining Co. in Darst Creek, Mirando, Pettus, Salt Flat and Saxet. Effective September 29 in Darst Creek by Gulf Pipe Line Co. and Texas Co. Effective October 2 by Magnolia Petroleum Co. Effective in Pettus and Salt Flat on September 29 by Humble Oil & Refining Co. and Gulf Pipe Line Co. Luling and Lytton Springs by Magnolia Petroleum Co. Duval County by Texas Co. Saxet, effective September 29, by Humble Oil & Refining Co. and Texas Co. Effective September 29 in Salt Flat by Shell Petroleum Corp.

(Continued on Page 39)

TANK WAGON MARKETS

Quotations for gasoline and kerosene in United States, as furnished by the larger marketing concerns, include taxes

January 9, 1934

Taxes

The gasoline quotations given in the following tables include the 1 cent Federal tax, as well as state, county and city taxes. The gasoline quoted is the regular or standard grade. In most marketing areas a third grade and a premium grade are also available.

Southern District

STANDARD OIL CO. (KENTUCKY)

	Gasoline			Kero.
	Tank wagon	Service station	Incl'ds tax	tank wagon
Atlanta, Ga.	21.0	21.0	7.0	14.0
Augusta	21.0	21.0	7.0	14.0
Macon	21.5	21.5	7.0	14.0
Savannah	21.5	21.5	7.0	14.0
Birm'ham, Ala.	23.5	23.5	8.0	12.0
Mobile	22.5	22.5	8.0	12.5
Montgomery	21.0	21.0	8.0	14.5
Jackson, Miss.	21.5	21.5	7.0	13.0
Vicksburg	21.0	21.0	7.0	13.0
Jack'ville, Fla.	21.5	21.5	8.0	12.5
Miami	21.5	21.5	8.0	13.5
Pensacola	21.5	21.5	8.0	13.5
Tampa	21.5	21.5	8.0	12.5
Lexington, Ky.	20.0	20.0	6.0	11.0
Covington	19.5	19.5	6.0	11.0
Louisville	19.5	19.5	6.0	11.0
Paducah	20.0	20.0	6.0	10.0

In addition to the state tax of 4 cents on gasoline, Montgomery has city and county tax of 2 cents on gasoline and one-half cent on kerosene. Kerosene prices in Georgia and Mississippi include 1 cent state tax; in Alabama, an inspection fee of one-half cent on kerosene and one-fourth cent on gasoline. To Pensacola, Mobile and Birmingham state taxes on gasoline add 1 cent city tax.

Southwestern District

MAGNOLIA PETROLEUM CO.

	Gasoline			Kero.
	Tank wagon	Service station	Incl'ds tax	tank wagon
Dallas, Tex.	15.5	19.0	5.0	8.5
Fort Worth	15.5	19.0	5.0	8.5
Houston	14.5	18.0	5.0	8.5
San Antonio	15.5	19.0	5.0	8.5
El Paso	16.0	19.5	5.0	11.0
Texarkana	15.0	15.0	5.0	8.5
Muskogee, Ok.	15 5	19 0	5.0	8 5
Okla. City	15 5	19 0	5.0	8.5
Tulsa	15 5	19.0	5.0	8 5
Ft. Smith, Ark.	*17 4	17.9	5.0	9.0
Little Rock	*19.9	20.4	7.0	9.0

*Less 3 cents to dealers.

Standard Oil Co. (Indiana)

	Gasoline			Kero.
	Tank wagon	Service station	Incl'ds tax	tank wagon
Chicago	17 3	17 3	4.0	9 7
Decatur, Ill.	17.7	17.7	4 0	10 2
E. St. Louis	17.0	16 2	4 0	9 5
Joliet	17.7	17.7	4.0	10.2
Peoria	17.7	17 7	4.0	10 2
Quincy	17 5	17.5	4.0	10.0
Davenport, Ia.	17 6	17 6	4 0	10.1
Des Moines	17 6	17 6	4.0	8 0
Mason City	17 6	17 6	4 0	10.1
Sioux City	17 2	17 2	4 0	9 7
Duluth, Minn.	18.2	18 2	4 0	10.4
Mankato	17.8	17.8	4.0	10 3
Minneapolis	17.9	17.9	4 0	10 4
LaCrosse, Wis.	19 3	19.3	4 3	10 8
Green Bay	18.7	18 7	5 0	10.2
Milwaukee	18.2	18.2	5.0	9 7
Madison	18 4	18 4	5.0	9 9
Detroit, Mich.	17.5	17 5	4 0	10.5
Grand Rapids	17.7	17.7	4 0	10.2
Saginaw	18 0	18 0	4.0	10.5
Evansville, Ind.	15 5	15.5	5 0	10 0
Indianapolis	18.7	18 7	5 0	10.2
South Bend	19.0	19.0	5.0	10.5
Fargo, N. Dak.	19 6	19 6	4 0	11 1
Huron, S. Dak.	19.9	19 9	5.0	11 4
Sioux Falls	19.4	18.4	5.0	10 9
K. C. Mo.*	16 7	16 7	4 0	8 2
Springfield*	16 6	16.6	4.0	9.1
St. Louis	15.7	15 7	3 5	8 7
St. Joseph*	16 3	16.3	4.0	8.3
Wichita, Kans.	15.6	15 6	4.0	8 1
Bartlesville, Ok.	16.0	18 5	5 0	8 5

*State tax 2 cents, 1-cent city tax and 1-cent Federal tax.

Effective June 1, 1933—Discounts off tank wagon price to consumers on 500 gallons or more per month in territory outside of Chicago metropolitan area: 2 cents on Ethyl and Red Crown gasolines, and 1 cent on Stanolind gasoline. One-half cent additional discount in Chicago division.

Effective July 1, 1933—Discounts on resellers authorized agent's agreement made off the service station price throughout the territory as follows: 2.5 cents on Red Crown, Ethyl and Standard Red Crown gasolines, and 1.5 cents on Stanolind gasoline. Half of reduction from normal service station price shall be absorbed by resellers up to maximum of 1 cent on all grades.

In St. Louis and St. Louis County, Missouri, the following discounts are in force: For 300 to 3,000 gallons monthly, 2 cents on regular and premium, 1 cent on third grade; for 3,001 to 10,000 gallons, 3 cents on regular and premium, 1 cent on third grade; for more than 10,000 gallons, 3½ cents on regular and premium, 1 cent on third grade.

Stanolex Furnace Oil in Chicago

Effective September 13, 1933, prices f.o.b. Chicago, tank wagon prices: No. 1 (36-40 lt. stw. zero), under 100 gallons, 8¼ cents; No. 2 (30-34 stw. zero), 7¾ cents; No. 3 (22-26 zero), 7¼ cents; No. 4 under 300 gallons (12-16 zero), 6¼ cents; viscosity of No. 4, 90-115 at 100° F.; No. 5 under 300 gallons, 6 cents; for deliveries of 100 gallons or more deduct 1 cent.

Naphtha

	Tank wagon
Oleum spirits	13.9
V.M.&P. naphtha	15.9
Cleaners' naphtha	15 0
Stanisol	15 0

Prices f.o.b. Chicago, September 13, 1933. Each of above prices subject to discount of 1 cent per gallon for 150-gallon lots if covered by contracts.

Atlantic Coast District

STANDARD OIL CO. OF NEW JERSEY

	Gasoline			Kero.
	Tank wagon	Service station	Incl'ds tax	tank wagon
Atl'tic City, N.J.	17.5	17.0	4.0	10.0
Newark	16.8	16.3	4.0	9.5
Annapolis, Md.	18.1	17.6	5.0	10.0
Baltimore	17.6	17.1	5.0	9.0
Cumberland	19.1	19.3	5.0	12.7
Wash'g'n, D. C.	15.8	15.3	3.0	11.0
Danville, Va.	20.2	19.7	6.0	12.9
Norfolk	18.7	18.2	6.0	11.2
Petersburg	19.5	19.0	6.0	11.4
Richmond	19.1	18.6	6.0	11.7
Roanoke	20.3	17.5	6.0	12.9
Charls'n, W.Va.	18.5	18.0	5.0	12.6
Parkersburg	17.8	17.3	5.0	11.2
Wheeling	18.5	18.0	5.0	12.2
Charlotte, N. C.	21.9	22.5	7.0	13.5
Hickory	22.2	21.7	7.0	13.7
Mt. Airy	22.2	21.7	7.0	13.8
Raleigh	21.7	21.2	7.0	13.3
Salisbury	22 0	17.3	7.0	13.6
Charleston, S.C.	19.7	19.2	7.0	11.3
Columbia	21.5	21.0	7.0	13.2
Spartanburg	21.9	21.1	7.0	13.5

Note—Dealer contracts are written at 2½ cents above the posted tank car price, less a voluntary allowance of one-half cent per gallon. This affects all points. Kerosene 1 cent off tank wagon for 25 gallons or more under contract except New Jersey and Baltimore, Md.

Central South District

STANDARD OIL CO. OF LOUISIANA

	Gasoline			Kero.
	Tank wagon	Service station	Incl'ds tax	tank wagon
N. Orleans, La.	20.0	19.5	*7.0	†12.0
Baton Rouge	19.5	19.0	6 0	†12.0
Alexandria	20 4	17 0	*7.0	†10 0
Lafayette	20 6	19 5	*7.0	†12.0
Lake Charles	20.5	20 0	*7.0	†12 0
Shreveport	18 2	15.5	6.0	†12 0
Knoxville, Tenn	23.7	22 7	8.0	13.0
Memphis	22.1	21.0	8 0	9 5
Chattanooga	23 5	19.0	8.0	12 0
Nashville	23 0	18.5	8 0	11.0
Bristol	23 6	21.0	8 0	14 0

*Includes city tax of 1 cent. †Louisiana kerosene prices include 1-cent state tax.

Commercial consumers for tank wagon delivery pay following amounts over tank car price, basis yearly deliveries:

1,000 to 75,000 gallons	2.5
75,000 to 300,000 gallons	1 5
Over 300,000 gallons	1.0

Pacific Coast Territory

STANDARD OIL CO. OF CALIFORNIA*

	Gasoline			Kero.
	Tank wagon†	Posted retail	Incl'ds tax	tank wagon
San Francisco	16.5	19 5	4.0	12 5
Los Angeles	16.0	19.0	4 0	12 5
Fresno, Calif.	17 5	20 5	4.0	14.0
Phoenix, Ariz.	18 5	21.5	6.0	‡16 0
Reno, Nev.	20.0	23 0	5.0	15 5
Portland, Ore.	19.0	22.0	5.0	13.5
Seattle, Wash.	19 0	22.0	6 0	13 5
Tacoma	19 0	22 0	6 0	13.5
Spokane	22 0	25.0	6.0	18.0

*Retail prices posted by Standard Stations, Inc., a subsidiary.

†Prices are at company's plant or depots, as company does not operate stations. A 4-cent per gallon discount is given dealers and mustomers taking tank wagon lots except in Phoenix where the discount is 1 cent. ‡Includes 5 cents state tax.

New York and Part of New England

STANDARD OIL CO. OF NEW YORK

	Gasoline			Kero.
	Tank wagon	Service station	Incl'ds tax	tank wagon
Albany, N. Y.	15.6	16.6	4.0	9.5
New York	15.5	16 5	4.0	8.5
Buffalo	16.2	17.2	4.0	9.5
Rochester	15.0	16.0	4.0	9.5
Syracuse	16.1	17.1	4.0	9.0
Boston, Mass.	15.5	16.5	4.0	8.0
Augusta, Me.	17.0	18.0	5.0	9.0
Manch't'r, N. H.	17.7	18.7	5.0	8.5
Burlington, Vt.	18.3	19.3	5.0	9.0

Pennsylvania, Delaware and Part of New England

ATLANTIC REFINING CO.

	Gasoline			Kero.
	Tank wagon	Service station	Incl'ds tax	tank wagon
Philadelphia, Pa.	15 0	16 0	4.0	10.0
Pittsburgh	16.5	17 5	4.0	10.0
Allentown	16.5	17 5	4 0	10 0
Erie	16 5	17.5	4 0	10.0
Scranton	16.5	17.5	4.0	10 0
Altoona	16.5	17.5	4 0	10.0
Dover, Del.	16.5	17.5	4 0	10.0
Wilmington	13 0	13.5	4.0	10.0
Boston, Mass.	16.5	17.5	4.0	8 5
Springfield	17.1	18.1	4 0	8 5
Worcester	17.0	18.0	4.0	8.5
Hartford, Conn.	15 9	16 9	3 0	8 5
New Haven	15 7	16.7	3.0	8.5
Providence, R.I.	15.5	16.5	3 0	8.5

Rocky Mountain District

CONTINENTAL OIL CO.

	Gasoline			Kero.
	Tank wagon	Service station	Incl'ds tax	tank wagon
Denver, Colo.	18.5	21.0	5.0	12 5
Pueblo	16.5	19.0	5.0	13 0
Grand Junction	20 5	23 0	5.0	15.0
Casper, Wyo.	19.0	21.5	5.0	11 0
Cheyenne	17 5	20 0	5 0	13.0
Butte, Mont.	20.5	23.0	5.0	17.5
Billings	22 5	25 0	6 0	16 5
Helena	22.0	24.5	6.0	17.5
Great Falls	22 0	24.5	6.0	17.5
Salt Lake, Utah	21.5	24.0	5 0	16 0
Boise, Idaho	22 5	25 0	6 0	18.0
Twin Falls	22.5	25 0	6.0	18.0
Albu'que, N. M.	19 0	22 0	*7.0	13.0

*One-cent city tax.

Effective October 21, 1933, discount to dealers with or without contract throughout Continental territory except New Mexico as follows: Service station price less 3 cents for regular grade and 2 cents for third grade.

Canada*

IMPERIAL OIL, LTD.
Imperial 3-Star Gasoline

	Gasoline			Kero.
	Tank wagon	Service station	Incl'ds tax	tank wagon
Hamilton, Ont.†	26.5	27.5	6 0	17.5
Toronto, Ont.†	26.5	27.5	6 0	17.5
Brandon, Man.*	31.0	34.5	7 0	22 5
Winnipeg, Man.	28 7	31 7	7 0	20.2
Regina, Sask.	29 0	32.0	6.0	21.5
Saskatoon, Sask.	31 8	34.8	6.0	24 3
Edmonton, Alta.	31 2	34 2	6.0	23.7
Calgary, Alta.	28 5	31 5	6 0	21.0
Vanc'ver, B.C.†	30.0	31.0	7.0	24 0
Montreal, Que.	24 0	27.0	6.0	17.0
St. Johns, N. B.	26.5	30.5	7 0	21 0
Halifax, N. S.	26.5	29 5	6 0	21.0

*Imperial gallon used in Canada. †Dealer discount posted tank wagon on gasoline in Ontario and British Columbia subject to dealer's discount of 2 cents per gallon.

Ohio

STANDARD OIL CO. OF OHIO

	Gasoline			Kero.
	Tank wagon	Service station	Incl'ds tax	tank wagon
Ohio points	16 5	17.5	5.0	*12.5

*Includes state tax of 1 cent, effective July 22.

Nebraska

STANDARD OIL CO. OF NEBRASKA

	Gasoline			Kero.
	Tank wagon	Service station	Incl'ds tax	tank wagon
Omaha	18 3	19.3	5.0	10.8
McCook	18 5	18.5	5.0	9.0
Norfolk	18 8	19 8	6.0	11.3
N. Platte	19 8	19.8	5.0	10.5
Scottsbluff	19.3	19.3	5.0	11.0

Note: Discount to dealers and AAA commissions. From service station price: Red Crown Ethyl and Standard Red Crown gasoline, 3 cents. Reliance (third grade) gasoline, 2 cents. Rentals under lease and agents agreement, one-half cent per gallon additional.

Discount to consumers under contract (large consumers under contracts and governmental units): On tank wagon deliveries of gasoline on monthly purchases of 500 gallons, or yearly purchases of 6,000 gallons, from the service station price: Red Crown Ethyl and Standard Red Crown Gasoline, 2 cents per gallon; Reliance (third brand) gasoline, 1 cent per gallon.

Retail Price Changes

Regular-Grade Gasoline and Kerosene

Magnolia Petroleum Co., January 1 reduced the tank wagon price of gasoline one-half cent in Dallas, Fort Worth, Houston, San Antonio and El Paso. On the same date it advanced both tank wagon and service station prices of gasoline one-half cent in Texarkana. On the same date it advanced the service station price of gasoline one-half cent in Fort Smith and Little Rock. January 4 the company advanced the service station price of gasoline 1 cent at all points in Oklahoma.

Standard Oil Co. of New Jersey, December 22, reduced the service station price of gasoline 1 cent in Roanoke; December 23, reduced the price 1 cent further; December 26, reduced the price one-half cent further. December 21, the company reduced the service station price of gasoline 1.1 cents in Charlotte. December 27 it reduced the service station price of gasoline 1½ cents in Washington. January 8, the company reduced tank wagon price of gasoline 1.2 cents throughout its territory. It made the same reduction in service station prices with the following exceptions: Cumberland, reduced .8 cent; Norfolk, advanced .1 cent; Wheeling, advanced one-half cent; Charlotte, reduced 1 cent; Washington, reduced .3 cent; Roanoke, advanced 1 cent.

Standard Oil Co. of New York, January 9, reduced tank wagon and service station prices of gasoline 1 cent throughout its territory.

Standard Oil Co. of Louisiana, December 25, reduced the service station price of gasoline one-half cent in Nashville; December 27, reduced the price one-half cent further. December 24, it reduced the service station price of gasoline one-half cent in Chattanooga.

The Atlantic Refining Co., December 22, advanced the service station price of gasoline one-half cent in Philadelphia. (This corrects an error published last week concerning the price change in Philadelphia.)

CRUDE OIL PRICE CHANGES

Effective January 5, the Ohio Oil Co. reduced the posted price of Illinois and Princeton (Indiana) crude 10 cents per barrel, making the new price $1.13 per barrel.

REVISED COASTAL ALLOWABLES

A special order by the Texas Railroad Commission amending its order fixing allowable production of crude oil in the State was issued on January 6. It changes the allowables in some of the pools in the Gulf Coast. The total allowable of the Texas Gulf Coast is fixed at 150,792 bbls. per day.

Revisions were made in the following fields, the figures given being the new allowables (in barrels): Damon Mound, 750; Goose Creek, 3,000; Greta, 8,500; Ariola, 885; Batson, 580; Buckeye, 400; Fannett, 520; Hull, old, 3,700; Humble, 3,500; Hockley, 7; Lost Lake, 200; Markham, 850; South Liberty, 470; Mykawa, 180; Nash, 50; North Dayton, 150; Orange, 790, and Port Neches, 1,200.

The Automobile Club of Michigan launched a campaign to reduce motor vehicle and gasoline taxes, declaring $83.25 total taxes on a small car, with $35.62 of the amount taxes on motor fuel, is too much.

NEWS FOR SALES DEPARTMENTS

Shell Winter Advertising Campaign to Be Continued

SAN FRANCISCO, Calif., Jan. 8.—Extension of the Shell Oil Co.'s winter advertising campaign to March 1, is provided by new schedules. Success of the initial winter campaign, featured by novel sales promotion methods, provided the reason for continued expenditures in 1934, company officials explained.

Jolly skating penguins, aroused curiosity in hundreds of Pacific Coast cities and towns last month as they cavorted on the streets to the tune of "The Skaters' Waltz" played on gaily decorated sound trucks. The penguins, impersonated by men on roller skates, symbolized the "thermalized" winter fuel.

Several of the sound trucks toured different sections of the western territory, each accompanied by from four to six "penguins," in addition to models of the quaint birds mounted on the trucks. Whenever they reached a town they put on a lively show, skating in fancy figures, directing traffic and generally entertaining folk who gathered around Shell service stations. They also distributed windshield stickers of the skating penguins.

MONTREAL IMPORTS

MONTREAL, Canada, Jan. 9.—The port of Montreal established a new record in 1933 in receipts of crude oil and refinery products from foreign points. Boats coming largely from United States and South American points discharged a total of 1,819,343 tons (12,735,401 bbls.). This total exceeds the 1932 figure, which was the previous record, by 247,474 tons. Imports of crude petroleum indicated an increase of 287,625 tons, while those of refined oil showed an advance of 20,515 tons. There was a decrease, however, of 60,666 tons in the amount of gasoline actually landed in the harbor here. This is attributed to the fact that it is found more economical to bring in the crude and refine it in Montreal.

The respective totals, compared with the previous year, are as follows:

	1932	1933	
Crude oil	1,398,462	1,686,087	+287,625
Gasoline	165,974	105,308	—60,666
Ref. oil	7,433	27,948	+20,515
Total	1,571,869	1,819,343	+247,474

Seven different firms were responsible for the importation of this large quantity of petroleum, these being the British American Oil Co., Ltd., the Imperial Oil Co., Ltd., the Lasalle Petroleum Refinery, Ltd., the McColl-Frontenac Oil Co., Ltd., the Shell Oil Co. of Canada, Ltd., the Sun Oil Co., Ltd., and the Sunny Oil Co., Ltd.

Some indication of the growing importance of the oil industry may be obtained from an examination of the following table, which shows the imports of petroleum and gasoline into Montreal during each of the last 11 years, with 1933 as the record year:

	Petroleum	Gasoline
1923	386,192	16,477
1924	410,995	18,282
1925	414,633	24,772
1926	688,319	22,847
1927	704,992	35,787
1928	797,533	68,791
1929	1,143,265	42,995
1930	940,592	98,980
1931	1,386,553	127,570
1932	1,345,084	161,128
1933	1,714,035	105,308

GASOLINE TAX FRAUDS

Two men who defrauded the State of Washington of $2,443.55 in tax refunds on gasoline used in motor boats recently pleaded guilty and were fined $350 each and sentenced to seven months at the Federal road work camp at Fort Lewis.

C. L. Suhr Reports Growing Confidence Throughout Western Pennsylvania

OIL CITY, Pa., Jan. 8.—Evaluating the developments of the past year as president of the National Petroleum Association, and at times weighing the significance of these activities as chairman of the refining subcommittee for this region, as director of the Pennsylvania Grade Crude Oil Association, and as president of a Western Pennsylvania refinery, Charles L. Suhr, head of the Pennzoil Co., stated in an interview that under the guidance of Harold L. Ickes, as oil administrator, the entire petroleum industry has raised itself from a level of misunderstandings, short-sighted selfishness and almost continuous recriminations, to a high plane of co-operative effort directed toward the effacement of all shades of unethical practices in all branches of the industry.

All of the responsible men in the oil business, Mr. Suhr said, have taken an active part in the formulation of the code of fair marketing practices. While it might have been expected that in many quarters attempts would be made to turn the NRA to personal advantage with little reference to the sacrifices involved, the actual evolution of the new deal in the petroleum industry has revealed a willingness to "meet competitors half way" for the purpose of basing all transactions soundly on economics, and scientifically in recognizing the rights of all manufacturers and traders, Mr. Suhr pointed out.

Much of the concern over consequences of Federal regulation which was manifested during the early code gatherings has been replaced by confidence. Frantic opposition to various proposals has calmed down to orderly presentation of facts disclosing the unfavorable aspects of these proposals. Confidence that the administration will deal fairly with all interests, giving all an opportunity to have their causes heard, said Mr. Suhr, has banished fear among the smallest units of the great industry.

This feeling of confidence, according to Mr. Suhr, is strong in the Pennsylvania Grade oil area. Here are the pioneers of the industry. They occupy an unique position in the three principal branches of the business. Their oil wells, many of which have been on the pump for more than 40 years, produce on an average of little more than 150 bbls. of oil a year. Their refineries number no mere skimming plants. Some of these refineries would be lost in a corner of a western topping system, but these small plants are designed to convert every part of their crude oil into valuable products. High prices, comparatively, are paid for Pennsylvania Grade crude oil, and it is necessary for the operators to cut lubricating oil fractions, reduce steam refined bottoms, and market crude scale wax and petrolatum as well as the usual motor fuels, naphthas, kerosene and furnace oils. The marketers offer premium lubricating oils, kerosenes and Diesel fuels. Through the progressiveness of some refiners, a competitive grade of gasoline (regular) is offered which is the equal of any of the nonpremium high antiknock value motor fuels on the market. The use of "Q" fluid to raise the octane number of straightrun gasoline, however, probably accounts for the comparatively few cracking installations in the region.

All of these operators, from crude oil producers to the marketers of refined products, are confident that no policy which would militate against their continued existence will get the approval of the administration. For these reasons, Mr. Suhr said, co-operation and observance of the NRA regulations are the watchwords of the region.

Refiners Making Contracts to Take East Texas Crude

KILGORE, Tex., Jan. 8.—Atlantic Petroleum Purchasing Corp., subsidiary of Atlantic Refining Co., has renewed its contract to purchase at the prevailing price the entire production of Mid-Kansas Oil & Gas Co. (Ohio Oil) in the East Texas Field. The amount at this time averages approximately 8,300 bbls. daily from 346 wells. During the last 12 months Atlantic has been buying on short-term contracts 5,000 to 7,500 bbls. daily from Mid-Kansas Oil & Gas Co., paying the posted price, plus the gathering charges of Illinois Pipe Line Co. The new contract is to run for an indefinite period.

Southern Oil Pipe Line Co. has contracted to sell approximately 3,500 bbls. daily of its East Texas production to the Republic Oil Refining Co., the posted price, plus 7½ cents a barrel for gathering, to be paid. The oil will be used in the Republic Oil Refining Co.'s refinery in Texas City. The contract is for six months.

MAJEWSKI TO SPEAK

B. L. Majewski, member of the Planning and Co-ordination Committee, will be the principal speaker at the annual convention and equipment show of the Wisconsin Petroleum Association to be held at the Hotel Plankinton, Milwaukee, January 23 to 25.

AUTOMOTIVE COMMITTEE

J. C. Bennett of the Associated Oil Co., San Francisco, Calif., has been appointed chairman for 1934 of the American Petroleum Institute's central committee on automotive transportation, according to announcement by W. R. Boyd, Jr., executive vice president.

A. F. Coleman, Standard Oil Co. of New York, New York, N. Y., is vice chairman, and D. V. Stroop, of the Institute staff, is secretary of the committee.

Following are the members of the 1934 committee: L. S. Bessonett, Standard Oil Co. of California; D. W. Davisson, Shell Oil Co.; R. F. Fike, Mid-Continent Petroleum Corp.; L. M. Goldsmith, Atlantic Refining Co.; N. R. Grimshaw, Standard Oil Co. (Indiana); O. H. Gundlach, Sinclair Refining Co.; T. D. Harris, Continental Oil Co.; Leo Huff, Pure Oil Co.; F. A. Jones, Shell Petroleum Corp.; L. C. Jones, Gilmore Oil Co.; A. W. Kenerson, Standard Oil Co. of Ohio; H. W. Kizer, Texas Co.; A. J. Knipping, Jr., General Petroleum Corp.; L. V. Newton, Byllesby Engineering Co.; Eugene Power, Union Oil Co. of California; A. Steiner, Sun Oil Co., and J. F. Winchester, Standard Oil Co. of New Jersey.

ELIMINATE TIDE WATER WELLS

Tide Water Oil Co. has eliminated the Tide Water Sales Corp., effective January 1. All contracts and orders were taken over and handled directly by the parent company.

Gasoline Sales in October Lower Than Those of 1932

Gasoline consumption in the United States, according to figures compiled by the American Petroleum Institute, was 1,359,391,000 gallons in October, 1933, as compared with 1,372,690,000 gallons in the same month of 1932, a falling off or 13,299,000 gallons. The October consumption in 1933 compares with 1,444,496,000 gallons consumed in September of the same year, a drop of 85,105,000. The daily average consumption in October was 43,851,000 gallons, as compared with 44,280,000 gallons in October, 1932, a falling off of 429,000 gallons. This was a change of .97 per cent in the daily average.

The Institute's estimate of consumption by states in October, 1933, and October, 1932, based upon the quantity of gasoline sold or offered for sale as reported by wholesalers and retailers under the tax or inspection laws follows:

	Gallons	
	Oct., 1933	Oct., 1932
Alabama	12,124,000	11,956,000
Arizona	5,624,000	5,647,000
Arkansas	11,471,000	10,957,000
California	107,138,000	111,126,000
Colorado	14,388,000	13,625,000
Connecticut	23,399,000	22,386,000
Delaware	2,823,000	3,256,000
Dist. of Columbia	8,896,000	9,064,000
Florida	15,455,000	15,813,000
Georgia	18,651,000	17,225,000
Idaho	5,372,000	4,995,000
Illinois	86,862,000	86,265,000
Indiana	38,160,000	38,114,000
Iowa	29,939,000	31,813,000
Kansas	25,761,000	27,877,000
Kentucky	14,956,000	15,275,000
Louisiana	15,003,000	15,402,000
Maine	10,992,000	10,851,000
Maryland	17,213,000	16,924,000
Massachusetts	51,915,000	51,527,000
Michigan	64,133,000	65,464,000
Minnesota	34,969,000	37,106,000
Mississippi	11,403,000	11,012,000
Missouri	40,570,000	42,710,000
Montana	6,237,000	5,777,000
Nebraska	15,510,000	16,824,000
Nevada	1,887,000	2,076,000
New Hampshire	6,455,000	6,192,000
New Jersey	61,022,000	61,530,000
New Mexico	4,361,000	4,174,000
New York	140,004,000	141,867,000
North Carolina	22,670,000	19,669,000
North Dakota	7,929,000	7,441,000
Ohio	76,890,000	85,248,000
Oklahoma	24,170,000	24,047,000
Oregon	14,014,000	13,400,000
Pennsylvania	96,498,000	93,672,000
Rhode Island	8,335,000	9,340,000
South Carolina	10,049,000	9,070,000
South Dakota	8,615,000	9,552,000
Tennessee	16,743,000	15,792,000
Texas	69,227,000	68,451,000
Utah	5,134,000	5,403,000
Vermont	4,631,000	4,608,000
Virginia	20,423,000	20,136,000
Washington	20,856,000	20,579,000
West Virginia	12,762,000	12,372,000
Wisconsin	34,378,000	35,948,000
Wyoming	3,374,000	3,132,000
Total	1,359,391,000	1,372,690,000
Daily average	43,851,000	44,280,000

FUEL DIVISION OFFICES MOVED

NEW YORK, Jan. 8.—Offices of the fuel oil division of the sales department of the Standard Oil Co. of New Jersey, formerly located on the ninth floor of 26 Broadway, have been moved to the fifteenth floor of that building.

NORWAY BUYS RUSSIAN OIL

Increased imports into Norway of Russian oil were evident in the third quarter of 1933, the report to the U. S. Commerce Department points out. The Soviet government has arranged for exclusive distributors in various districts of Norway, granting a 10-year contract upon condition that they provide the necessary equipment.

NEBRASKA JOBBERS MEET

The meeting of the Nebraska State Petroleum Committee will be held at the Hotel Pawnee, North Platte, Neb., on Tuesday, January 23, at 9 a.m.

NEWS FOR PETROLEUM REFINERS

B. S. Phillips New Manager of Lubricating Oil Sales

B. S. Phillips has been named manager of lubricating sales for the Pennzoil Co. to succeed W. S. Zehrung who was made general manager for the company. Announcement of the latter was made in The Oil and Gas Journal December 28 and at that time Mr. Zehrung indicated that he expects to continue to remain active in the work of the various local committees as part of the administration's program to improve and stabilize prices and working conditions.

BYRON S. PHILLIPS

Mr. Phillips joined the Pennzoil Co. of California in 1922 as advertising manager, and later became district sales manager. In 1925, he left this position to go into the insurance business; later became advertising manager of the California Petroleum Co.; and in 1930 came to the Pennzoil Co. of Pennsylvania as advertising manager. Early in 1932 he became Mr. Zehrung's assistant, and now succeeds him as manager of lubricating sales.

New Cracking Plant to Be Constructed in Henderson

DALLAS, Tex., Jan. 8.—Work is under way preliminary to construction of a new cracking unit in Henderson, Tex., according to Freeman W. Burford, president of the East Texas Refining Co.

Prices on materials have been asked, Mr. Burford said, and the company's engineering department will do the actual construction work. Completion of the unit is expected to be about March 10.

The new unit will transform the present skimming plant into a 5,000-bbl. throughput combination plant.

"With our 10,000-bbl. combination refinery at Longview," the East Texas president said, "we will have two plants with which to cope with modern economic conditions under a stable market. It is our belief that the East Texas oil field's daily allowable will be increased when consumption goes up in the spring, and we want to be ready to take care of added production from our own wells and those whose output we buy."

Joint Committee to Study Effect of High Temperatures on Metals in Refineries

The joint research committee of the A.S.M.E. and A.S.T.M. for the study of effect of temperature on the properties of metals have outlined a tentative program of laboratory and practical testing and is seeking guidance in the needs of refiners and refinery equipment manufacturers in perfecting the procedure. In a statement by H. W. Gillett, of the Battelle Memorial Institute, chairman of the joint committee on publications, he points out that "the logical base line for high temperature design, comparable to the tension test for ordinary temperature design, is the stress for a given amount of deformation, determined by tests, each at one constant temperature and one constant load. This requires a family of curves obtained by long-time "creep" tests. As is usual in the development of a new type of testing, early results were shrouded in uncertainty because it was not clear whether the discrepancies and discordances in the results of different observers were due to inaccuracies in the method of test, such as insufficient realization of the necessity for precise temperature control, too short periods of test, etc., or to real differences in supposedly similar lots of material. The testing difficulties appear well on the way toward being smoothed out by the promulgation last June of a tentative creep test code which summarizes in a few essentials of procedure the experience of the committee members and of those of its many subcommittees.

"Pressure is often put on the testing engineer to provide quicker returns when a given lot of material is submitted for high-temperature appraisal. The suggestions for short-cuts have been many. They range from the super-refined determination of short-time proportional limit, through deformation measurements carried on for a day or so, "relaxation" tests starting at high loads automatically reduced, other tests starting at a high temperature with temperature automatically reduced, through cantilever tests, restrained bend tests, step-up and step-down tests on a single specimen, etc., down to the abandonment of all short cuts and the use of the recognized creep method with the aim of carrying it on only for just the period required to show clearly the future behavior of the material.

Proponents of suggestions for short-cuts normally advocate them primarily for "sighting shots" to reduce the necessary number of creep tests, or for appraisal of the uniformity of a given material from lot to lot rather than as a true foundation for design values, but either the proposer of the short-cut or someone who reads or hears of it, ultimately attempts to find some conversion formula by which the short test can be made to tell the long story. Progressive engineers have an open-minded attitude toward accelerated methods but at the same time one that demands engineering proof of, instead of mere hope of, correlation.

The joint committee has, in its 10 years of existence, assembled and disseminated much basic information on the relation between high temperature fatigue and creep, the effect of grain size, etc., and on the broad problem of stability of alloys at high temperature, a metallurgical aspect that must always be considered, and has on its immediate program or those of special subcommittees constituted for the purpose of planning, financing and carrying them out, specific problems on specific alloys whose clarification will advance fundamental knowledge.

"The committee is therefore suggesting that a correlation progress should be undertaken wherein, as a minimum, one ferritic and one austenitic steel, each most carefully chosen for metallurgical uniformity and stability, would be subjected to creep determinations, at a temperature in each case chosen in view of the recognized uses for such materials at those temperatures, and at three loads, chosen to produce creep rates of the order considered allowable in industrial use. These creep tests would continue for three years and be made under all the refinements of the A.S.T.M.-A.S.M.E. tentative code.

Designers and users, as well as producers, of alloys for high temperature equipment, are invited to inform the secretary of the joint committee, N. L. Mochel, Westinghouse Electric & Manufacturing Co., Lester Station, Philadelphia, Pa., whether they would like to see such a correlation program taken up by the joint committee. The committee desires to be as responsive to the wishes of the interested engineering industries as the available financial resources will allow.

LION TO SELL DIRECT

T. M. Martin, vice president for the Lion Oil Refining Co., issued the following announcement in part in regard to that company's new policy of handling asphalt sales through direct representation:

"In previous years the sale of Lion Asphalt Products in the northern territory has been handled by the American Mexican Petroleum Corp. of Chicago. Effective January 1, 1934, Fred C. Campbell, with headquarters in the Willoughby Tower, Chicago, will succeed the American Mexican Petroleum Corp. in this respect only."

BOYNTON REFINERY IS SOLD

The Marathon Oil Co.'s refinery in Boynton, Okla., with 150 storage tanks, has been bought by the Sonken-Galamba Corp., according to Herman Sonken, president of the corporation. The deal was closed with A. J. Slater, vice president of Marathon. The purchase price was said to be $26,000 in cash. The purchasers plan to dismantle the plant, which includes cracking, skimming and lubricating units, with a wax plant, and sell it.

TEXAS OIL PRODUCTS PARTY

Approximately 250 guests of Starns, Harrison & Associates, owners of the Texas Oil Products Co., were entertained New Year's Day at Woodbine Lodge, near Gladewater, Tex. Guests were invited from all parts of the Mid-Continent and included refiners, jobbers, brokers, sales representatives, equipment men and traffic representatives.

R. E. Wilson Appoints 1934 Committees on Refining

R. E. Wilson, vice president of the Standard Oil Co. (Indiana), has been named chairman of the Central Committee on Refinery Technology for 1934 by Howard Bennette, of the American Petroleum Institute, chairman of the general committee of the division of refining. Dr. R. P. Anderson, of the Institute staff, is secretary.

Chairman Wilson in turn has appointed the following officers of committees working with the central group in 1934:

Committee on Accident Prevention in Refineries—C. W. Smith, Standard Oil Co. (Indiana), Chicago, chairman; H. N. Blakeslee, American Petroleum Institute, Dallas, Tex., secretary. Committee on Corrosion of Refinery Equipment—Walter Samans, Atlantic Refining Co., Philadelphia, chairman; D. V. Stroop, American Petroleum Institute, New York, secretary. Committee on Disposal of Refinery Wastes—John S. Hess, Sinclair Refining Co., New York, chairman; Mr. Stroop, secretary.

Committee on Fire Prevention in Refineries—C. E. Townsend, Sun Oil Co., Philadelphia, chairman; Mr. Stroop, secretary. Committee on Motor Fuel Research — Doctor Anderson, chairman. Committee on Standardization of Refinery Equipment—Arthur E. Pew, Jr., Sun Oil Co., Philadelphia, chairman; Doctor Anderson, secretary. Committee on Testing Methods and Specifications—K. G. Mackenzie, the Texas Co., New York, chairman; Doctor Anderson, secretary.

Interesting Day Promised Fire and Safety Marshals

OIL CITY, Pa., Jan. 8.—An interesting program has been prepared for the semiannual meeting of the Fire and Safety Marshals of the National Petroleum Association to be held here Thursday, January 11, in the Oil City Y.M.C.A. The day will start with an inspection of the Pennzoil Co. plant No. 2, with explanation of the fire prevention and safety measures used there. Following this trip luncheon will be served in the Y.M.C.A. at 12:30 o'clock. The afternoon program, opening at 2 o'clock, with J. H. Herbert, president of the Fire and Safety Marshals, presiding, follows:

"The Practical Aspect of Fire Prevention and Safety," C. L. Suhr, president, National Petroleum Association.

"First Aid in Refineries," L. D. Fulton, Pennzoil Co.

"Pennsylvania's Accident Prevention Contest for 1934," Joseph C. Stennett, chief accident prevention section, Pennsylvania Department of Labor and Industry.

"Extra Protection of Refineries from Fire Hazards," Jack Dayne, mayor, Oil City.

"Safety Measures and Insurance Premiums," Joseph W. Barr, president, Barr Insurance Co.

"Co-operative Efforts in the Interest of Fire Prevention and Safety," J. H. Herbert, president, and the following group chairmen: S. M. Wolbert, Bradford; F. J. Kiernan, Warren; D. J. Harvey, Oil City, and J. B. Loop, Pittsburgh.

NEW EAST TEXAS PLANT

Wichita Refining Co., Inc., has dismantled its 100-bbl. skimming plant at Wichita Falls and is moving same to the East Texas Field to be re-erected there. Roy I. Carter, independent operator of Wichita Falls and East Texas, owns the plant.

A. E. Bradshaw National Bank President; E. I. Hanlon Chairman of the Board

Announcement has been made by the National Bank of Tulsa of the election of E. I. Hanlon as chairman of the board and of A. E. Bradshaw as president of that institution. Mr. Bradshaw

A. E. BRADSHAW

succeeds Elmore F. Higgins who came to Tulsa from New York two years ago.

E. I. Hanlon, new chairman of the board, has been a resident of Tulsa since 1917 and has been active in the oil and gasoline business. He has been identified in financial circles in Tulsa since 1928 and has always been keenly interested in maintaining for Tulsa its prestige as an oil and financial center. Mr. Hanlon started his career in the oil business 30 years ago in Sistersville, W. Va. He is president of Henighan & Hanlon and chairman of the board of Hanlon-Buchanan, Inc., and has various other connections in the oil and gasoline business.

A. E. Bradshaw, president-elect, has been actively engaged in the banking business in Tulsa since 1901. Formerly a country school teacher in Seymour, Mo., he came to Tulsa as a clerk in the City National Bank which was later merged with the First National Bank of Tulsa.

With associates he organized the Bank of Oklahoma which later purchased the First National Bank of which he became an officer. He served continuously with that institution until last September when he resigned as executive vice president of the First National Bank & Trust Co. of Tulsa to accept the presidency of the Oklahoma Natural Gas Co. after having been active in the reorganization of that corporation.

Mr. Bradshaw is one of the best known bankers of the Southwest and brings to the National Bank of Tulsa long experience and a wide acquaintanceship. In commenting on his connection with the National Bank of Tulsa, Mr. Bradshaw said:

"It is a source of deep gratification to me to have been asked to assume the presidency of the National Bank of Tulsa, as in so doing I become a part of an institution that is outstanding in this section of the country. There are only two banks, one in the tenth and one in the eleventh Federal Reserve districts that have a larger capital structure than the National Bank of Tulsa, and with this ample capital and with facilities entirely adequate we will be able to care for the needs of business in this section. Our directorate will be active and composed of Tulsa men experienced in all phases of the oil industry and other lines of business. The National Bank of Tulsa is a commercial bank and its services will be available to customers large or small. The policy of this bank will be constructive yet conservative.

"I am very glad to again be identified with banking in Tulsa in which I have spent practically all of my business career and I feel certain that I shall be very happy in my new connection and with my new business associates."

E. I. Hanlon, in assuming the chairmanship of the board, said:

"In accepting the chairmanship of the board of directors of the National Bank

E. I. HANLON

of Tulsa, I realize my responsibility to the bank, to this community and to the entire Southwest. Tulsa is the recognized center of the oil industry in the Mid-Continent area and is located in the heart of a district with great agricultural and industrial possibilities which are awaiting development. The National Bank of Tulsa has become known as 'The Oil Bank of America' and this reputation will be maintained under the direction of men experienced in all phases of the oil industry.

"The election of Mr. Bradshaw to the presidency of this bank marks a forward step in banking circles in Tulsa and we are all very much gratified to have as our associate an executive of such high standing, wide acquaintance and recognized ability."

Forecasters of Dull Market Can Say "I Told You So"

(Continued from Page 22)

ported to have been available at 3⅜ cents a gallon at the refinery. Canny buyers referred to this alleged opportunity in East Texas in dickering with Oklahoma refiners, with the inevitable result that the Oklahoma prices of a week ago were shaded.

Natural gasoline sagged even more heavily than the refinery product. Dealers reported a fair volume of business, but it was pointed out that new production coming into the market kept the supply ahead of the demand, with the usual effect on prices.

Demand for kerosene was fair, with prices unchanged. Buying of distillates revealed no scarcity of supply. Burning oils were firm. Quotations on zero cold-test fuels underwent no change, but it was evident that the supply was not keeping pace with demand. Zero gas oil was scarce and in some cases distillates were being shipped instead. Lubricants were strong. Wax was firmer.

PRECISION VALVE ACTION

assured

WHEN YOU INSTALL THE TAYLOR DUBL-RESPONSE SYSTEM WITH CONTROL UNIT MOUNTED ON THE VALVE

THE ONE SURE WAY to get *instant* and *automatic* precise valve action is the way Taylor does it—by mounting the Control Unit on the valve. By automatically varying the air pressure (from an auxiliary supply) it provides automatic correction for valve stem friction . . . compensation for air supply pressure changes . . . correction for pressure changes of the controlled medium.

Here are more reasons why the Taylor Dubl-Response Regulator outperforms all other regulators on the most difficult temperature, pressure and flow control jobs. It provides:

A sliding adjustment for sensitivity or throttling range (an exclusive feature).

An automatic "reset" for load changes maintains the control point regardless of load variations.

Control aids, such as by-pass valves, etc., are eliminated.

To learn more about this new development of Taylor engineers, send for the special bulletin "Precision Control." To take up specific problems of temperature, pressure and flow control, send for a Taylor Representative. Address Taylor Instrument Companies, Rochester, New York.

Taylor TEMPERATURE AND PRESSURE INSTRUMENTS

INDICATING · RECORDING · CONTROLLING

NATURAL GASOLINE MANUFACTURE

Seek Permission to Build Another Gulf Coast Plant

AUSTIN, Tex., Jan. 8.—On January 10 an interesting decision must be made by the Texas Railroad Commission in the request of Garland Clymore to be permitted to build a 15,000-gallon natural gasoline plant in the Agua Dulce Field along the Gulf Coast in Texas. The permit sought is understood to be similar to those issued to manufacturers in the Panhandle area of Texas, who are processing the gas through plants and allowing the residue to be dissipated into the air.

It will be remembered that the commission, had limited the producing and processing of gas in Texas to the quantity utilized to produce light or power, until several months ago when a decision was made to grant permits to many producers who could not find an outlet for their gas through the larger pipe line systems. At the time the permits were issued a statement was made that it would apply only to fields of vast resources and a high enough acreage was named to make only the Panhandle come under the ruling.

Now, if permission is granted on a similar basis for the processing of gas in the Gulf Coast fields, there may come a substantial increase in the number of plants operating in this otherwise, scantly developed area.

Natural gas in the Agua Dulce Field from the few deep wells that have been completed will produce from 1 to 1¼ gallons of gasoline from 1,000 feet of gas compared to 1 quart to the 1,000 feet of gas in most of the Panhandle of Texas where the gas is being used solely in many instances for making natural gasoline. The Clymore Gasoline Co. has a 50,000-gallon plant in the Refugio Field but other than this very little attention has been paid to natural gasoline in the coast, outside the Conroe area.

Northwest Butane Plants Sold by Pacific Company

SAN FRANCISCO, Calif., Jan. 8.—Butane gas plants located at scattered points in Washington and Oregon which have been operated by the Natural Gas Companies of Washington and Oregon respectively through their common holding company, the Pacific Public Service Co., have been sold to a group headed by Bernard W. Ford, vice president of Blyth & Co., nationally known investment house, and also vice president of Pacific Lighting Corp. This announcement was made by R. W. Hanna, president of Pacific Public Service Co.

The terms of the sale were not made public, and Mr. Hanna in his statement did not further indicate the identity of the purchasing group other than to name Mr. Ford as its head. Mr. Ford is located in San Francisco.

The butane plants in Oregon are located in Bend, Coquille, Cottage Grove, The Dalles, Klamath Falls and LaGrande, and in Washington are located in Anacortes, Camas, Port Angeles, Port Townsend and Shelton.

The building of these plants was undertaken primarily as a means of introducing the conveniences of gas as a fuel to the people living in growing communities, too thinly populated at the time to justify a natural gas line from the producing fields. The plan was intended to lead to the expansion of the pipe line system in future years and in that manner might be considered as a "service experiment."

Stocks of Natural Gasoline Increase for First Time in the Last Seven Months

Natural gasoline stocks increased for the first time in November in the past seven months. This reflects the higher rate of production in those areas from which major pipe line systems radiate to supply gas to cities and industries. The winter weather has occasioned a marked pickup in gas sales and this has been reflected in the production of those plants known to the gasoline industry as "utility" plants. These supply approximately 25 per cent of the total natural gasoline and of course the production from these plants will vary widely from one season to the next.

In November an average of 4,100,000 gallons were manufactured daily and in October the average was 4,040,000 gallons. Stocks at the close of November reached 25,586,000 gallons whereas on the first day of the month they were 24,043,000 gallons.

There was comparatively little change in the production of the individual fields during November. Although of less importance than many other fields with respect to output, considerable interest has been placed in the trend of production in East Texas. During November the total for the month declined slightly. The output in that month was 1,900,000 gallons and in the previous month was 2,000,000 gallons.

PRODUCTION AND DISTRIBUTION
(Thousands of barrels of 42 gallons)

	November, 1933 Total	November, 1933 Dy. av.	October, 1933 Total	October, 1933 Dy. av.	Jan.-Nov., 1933	Jan.-Nov., 1932
Production	2,931	98	2,981	96	30,605	33,350
Decrease in all stocks	162	5	257	8	80	.....
Total	3,093	103	3,238	104	30,685	33,350
Blended at refineries	2,579	86	2,513	81	21,986	22,927
Blended at plants east of Calif.	15	....	14	....	116	42
Run through pipe lines in Calif.	121	4	112	4	1,161	1,149
Jobbers, exports, etc.	205	7	333	11	4,333	5,367
Increase in all stocks	....	....	....	....	....	231
Losses	173	6	266	8	3,089	3,634
Total	3,093	103	3,238	104	30,685	33,350

PRODUCTION OF MOTOR FUEL
(Thousands of barrels of 42 gallons)

	November, 1933 Total	November, 1933 Dy. av.	October, 1933 Total	October, 1933 Dy. av.	Jan.-Nov., 1933	Jan.-Nov., 1932
Refinery gasoline:						
Straightrun	14,798	493	17,345	560	180,736	180,074
Cracked	15,393	513	16,001	516	166,384	157,219
Natural gasoline:						
Production	2,931	98	2,981	96	30,605	33,350
Deduct losses	173	6	266	8	3,089	3,634
Benzol	125	4	139	4	1,344	945
Total motor fuel	33,074	1,102	36,200	1,168	375,980	367,954

PRODUCTION AND STOCKS BY FIELDS
(Thousands of gallons)

	Natural gasoline: Production Nov., 1933	Oct., 1933	Jan.-Nov., 1933	Jan.-Nov., 1932	Stocks end of month Nov., 1933	Oct., 1933	Blended motor fuel November, 1933: Natural gasoline used	Naphtha or other oils used	Stocks end of month
Appalachian	5,600	5,300	53,400	54,300	2,840	2,045	139	33	80
Ill., Ky., Ind.	800	700	7,300	8,500	180	203	....	....	....
Oklahoma	31,100	32,800	328,200	349,900	11,737	11,409	45	92	38
Oklahoma City	9,100	9,100	82,900	71,800	3,543	2,644	....	....	....
Osage County	3,500	3,800	38,000	45,400	2,555	2,954	3	....	12
Seminole	7,700	8,600	89,300	120,700	3,103	3,336	2	....	....
Rest of State	10,800	11,300	118,000	112,000	2,536	2,475	40	92	26
Kansas	2,200	2,000	20,800	22,600	326	558	25	19	27
Texas	32,700	32,100	325,000	341,100	6,512	5,420	332	555	79
East Texas	1,900	2,000	17,900	9,700	122	154	303	554	70
North Texas	1,700	1,800	18,300	28,000	514	377	....	....	....
Panhandle	17,800	16,600	160,400	167,100	2,914	2,482	1	1	....
West Central	7,100	7,100	77,300	79,200	1,905	1,797	28	....	9
Rest of State	4,200	4,600	51,100	57,100	1,057	610	....	....	....
Louisiana	3,100	3,100	34,800	43,000	812	687	57	....	9
Arkansas	1,100	1,200	13,800	17,400	110	149	35	539	95
Rocky Mountain	5,300	4,900	51,500	57,700	851	842	....	....	....
California	41,200	43,100	450,600	506,200	2,218	2,730	....	....	....
Huntington Beach	3,200	2,800	22,600	15,100	....	....	....	....	....
Kettleman Hills	12,600	12,600	119,800	121,800	....	....	....	....	....
Long Beach	6,000	5,700	76,000	103,500	....	....	....	....	....
Santa Fe Springs	5,500	6,300	75,100	92,400	....	....	....	....	....
Ventura Avenue	3,500	3,400	35,300	39,500	....	....	....	....	....
Rest of State	10,400	12,300	121,800	133,900	....	....	....	....	....
Total	123,100	125,200	1,285,400	1,400,700	25,586	24,043	633	1,238	328
Daily average	4,100	4,040	3,850	4,180	....	....	21	41	11
Total (thous. of barrels)	2,931	2,981	30,605	33,350	609	572	15	29	8
Daily average	98	96	92	100	....	....	....	....	....

SELL PAN CALIFORNIA PLANT

LOS ANGELES, Calif., Jan. 6.—Properties and equipment of Pan California Oil Corp. will be sold to the highest bidder by Robert Bromberg, receiver-in-equity, on January 18 and 19, it was announced yesterday.

On January 18 the company's Inglewood absorption plant, warehouse, wells and equipment and other assets will be disposed of. The sale will be held at the base of the statue of Stephen White on the lawn in front of the Broadway entrance to the Los Angeles County court house.

On the following day the sale is to take place at the Orange County court house. Property to be sold at that time includes Huntington Beach lots and a well.

California Manufacturers Reduce Gasoline Stocks

Natural gasoline stocks at California plants were reduced 262,758 bbls. during November and on December 1 were 60,000 bbls. less than a year ago. This improved statistical situation is a reflection of the greater refinery demand for the material during the colder weather. This reduction in stocks was made despite an increase in production of 347 bbls. daily over that of the previous month.

Natural gasoline production during November amounted to 32,722 bbls. daily, while refinery utilization increased 3,992 bbls. daily and amounted to 34,704 bbls. Shipments decreased 2,443 bbls. daily.

Considering the 11-month period, natural gasoline production for 1933 through November was 32,000 bbls. daily, a decrease of 4,000 bbls. under 1932. Refinery utilization during this period increased 1,000 bbls. daily in 1933, amounting to 27,000 bbls., while offshore shipments decreased 2,000 bbls., amounting to 3,000 bbls. daily. Stocks at the end of November were 2,277,348 bbls., a decrease of 262,758 bbls.

SUPPLY

	Nov.	Oct.
Total production	33,214	33,597
Stock trans. (deliv.) receipt —net	(343)	(178)
Total	32,871	33,419
Deduct refinery requirements:		
Run to stills	4,040	3,599
Blended	30,664	27,113
Total	34,704	30,712
Gains (losses) unaccounted for—net	(2,360)	(1,712)
Net supply available to market	(4,193)	995

DEMAND

Domestic consumption inc. bunkers	478	510
Pacific foreign exports	.....	1,432
Atlantic foreign exports	1,661	5,099
Intercoastal shipments	2,427	.....
Total market demand	4,566	7,041
Surplus or (deficit)	(8,759)	(6,046)

OPERATING DATA FOR NOVEMBER

Number of plants operating—103.
Daily capacity in thousand cubic feet—2,364,653.

PRODUCTION BY FIELDS

	Gas treated (M.cu.ft.)	Natural gasoline produced (gallons)
Fullerton and Whittier	424,498	1,090,148
Midway	1,396,707	2,552,299
Huntington Beach	2,165,829	3,188,298
Kettleman Hills	10,494,755	12,586,355
Long Beach	2,214,310	6,024,554
Richfield	523,579	610,490
Santa Fe Springs	3,289,488	5,507,060
Seal Beach	435,028	760,650
Ventura Avenue	3,674,644	3,506,287
All other fields	3,475,441	5,403,547
Total	28,094,279	41,229,688

PRODUCTION BY METHODS

Type of plant—	Gas treated	Natural gasoline produced (gallons)	Gasoline recovery per M.cu.ft. gas treated
Oil absorption	27,900,086	41,073,805	1.472
Compressor	194,193	155,883	.803
Total	28,094,279	41,229,688	1.468

Finished gasoline produced at plants—70 bbls.

STOCKS

	Gallons	Barrels
Natural gasoline held by plant operators	93,162,258	2,218,149
Natural gasoline held by refiners	2,486,377	59,199
Total	95,648,635	2,277,348

LIQUEFIED PETROLEUM GASES
(Daily—barrels)

	Nov.	Oct.
Production	492	528
Sales	478	539

Late Fields

OKLAHOMA

In the new John Fitts Field in southern Pontotoc County, Oklahoma, the well of E. H. Moore and others, completed in September with an initial production of 350 bbls., and which has been shut in most of the time since, was opened this week and made 180 bbls. in 18 hours. It is in C SE SE SW Section 29-2-7. Delaney and others' No. 1, NW cor. Section 30-2-7, was opened this week and flowed 75 bbls. in seven minutes and 135 bbls. in 25 minutes and then quit. Tubing, 2½-inch, was run with disc to retard the oil flow until pipe was set. Later the crew was unable to knock out the disc. Connection was made with a nearby gas well and the oil well will be put on gas lift.

By the use of acid a number of wells in the South St. Louis, Pottawatomie County, Field registered good production this week. Le Dell and others' No. 1, C NW SE SW Section 2-7-4, flowed 750 bbls. in 48 hours from Hunton lime at 3,592-3,955 feet; Hilton Phillips' No. 1, C NE NE NE SW Section 21-7-4, 505 bbls. in 18 hours from Hunton lime at 3,592-3,955 feet; Sinclair Prairie Oil Co.'s No. 3, C NE SE SE Section 32-7-4, 648 bbls. in 24 hours from dolomite at 4,172-93 feet; Mae Bris Oil Co.'s No. 1, C SE NE NW Section 34-7-4, swabbed 770 bbls. of oil and 2,000 bbls. of water from dolomite at 4,240-83 feet.

Horman's No. 2, CSL N half NE NW Section 15-7-8, Holdenville district, is a 40,000,000-foot gasser from Booch sand at 2,883-2,900 feet.

ANDERSON COUNTY, TEXAS

FORT WORTH, Tex., Jan. 9. — Tide Water and others' No. 3 Morning, in Sanchez Survey, southwest Anderson County, ran tubing and tested at a total depth of 5,281 feet, showing no oil but salt water and from 10,000,000 to 15,000,000 feet of gas through two 2-inch flow lines and on three-eighths inch choke on tubing and casing. This test is three-quarters of a mile southeast of the discovery well.

Taxes on Gasoline Must Be Paid by Tri-State Transit

SHREVEPORT, La., Jan. 8.—Reversing a judgment by Judge J. H. Stephens of Shreveport, the Supreme Court ordered the Tri-State Transit Co. of Louisiana, Inc., to pay $12,444.97 in taxes on gasoline brought into the State and used in interstate and intrastate traffic. The Supreme Court based its judgment on a series of recent rulings by the U. S. Supreme Court.

Another judgment from Shreveport reversed was that of Judge Robert Roberts in a gasoline tax case involving the Cedar Grove Refining Co. The Supreme Court held that the company must pay the gasoline tax of 4 cents a gallon on 302 gallons of "tractor distillate" used in low compression motors.

The lower court held that the tax could be applied only to fuels used in high compression motors, but the Supreme Court ruled that the tax is to be levied on fuels used in motor vehicles irrespective of the type of vehicle.

Unusual Records Are Kept by Canadian Oil Companies

PETROLIA, Ontario, Jan. 8. — The Petrolia refinery of Canadian Oil Companies, Ltd., has the two distinctions of having been in constant operation since 1909 and having laid off practically none of its staff during the depression. The plant employes 125 men. General construction and repair work are being carried on all the time, the repair gang including about 30 bricklayers, boiler makers, pipe fitters, etc. About 50 are employed in the manufacturing department on tower shift work, and a large office staff is retained.

Ickes Hears Exorbitant Rates of Interest Force Code Violations in East Texas

WASHINGTON, D. C., Jan. 9.—Secretary Ickes, oil administrator, today announced he had been advised that "exorbitant rates of interest" charged by loan companies and banks in the East Texas oil field area were forcing violations of oil production curtailment orders and preventing the financing of improvements that would give jobs to thousands of workers. The administrator appealed to banks and loan companies to exact "reasonable interest charges."

"Some of the independent leaders in the petroleum industry have told me that exorbitant interest rates are imposing 'burdensome and onerous conditions' which give the loan companies virtual command over the operation of properties and that they are requiring producers to exceed their allowable production in order to repay more quickly borrowed funds," the administrator said.

"The information given to me, and which I am having investigated, is in substance that there are many loan companies and banks in East Texas which are charging interest running up to 20 per cent in many cases, while others are taking 2 bbls. of the oil produced for each barrel the producer can have.

"I am advised by a number of independent producers that many operators are chiseling on the labor clause in the code so that they can wring out enough cash from their revenues from oil runs to pay their creditors and that it is their opinion that this sort of a 'cut-throat credit policy' prevents creation of thousands of jobs because operators cannot reasonably finance needed improvements.

"I feel that the bankers and financiers should charge only reasonable rates of interest for their loans in as much as exorbitant interest rates undoubtedly prevent a proper flow of credit to producers to enable them to do their part in the general recovery program."

Pipe Line Tax Base Is Common Carrier Charge

WASHINGTON, D. C., Jan. 9.—Proper base for assessing Federal pipe line tax is the usual charge of common carriers in the field rather than the nominal charge of private carriers, the Supreme Court of the United States ruled yesterday in the case of Cosden Pipe Line Co.

The company maintained gathering lines within Oklahoma to carry oil to the Tulsa refinery of Cosden & Co., which also owned the pipe line. It was not a common carrier and did not file rates, but carried some oil for itself and some for others. From 1917 to 1921 it charged Cosden & Co. from 5 to 10 cents per barrel. The Revenue Act of 1917 assessed 5 per cent on pipe line charges and the Act of 1918 assessed 8 per cent. The commissioner of internal revenue determined that a fair charge would have been 20 cents per barrel, based on 12½-cent gathering charge and 7½-cent trunk line charge, both figures being the usual common carrier rate in those fields.

The company sued for return of excess taxes on four counts, one of which was rejected and one partly sustained, and these were not passed on by the Supreme Court. On the other two claims the lower Federal courts held that the charge collected was the proper tax base, but the Supreme Court reversed this, saying the intent of the law was to lay the tax equitably on all transportation both by common or private carrier and that where special conditions made a charge less than reasonably appropriate for service rendered, the usual charge would be the basis for taxation and that a nominal charge cannot be used as a means of avoiding the tax. The court held that trunk line service was not performed, but that the tax should be on the 12½-cent gathering charge.

ALBERTA GASOLINE PRICES

CALGARY, Alberta, Jan. 6. — Gasoline wholesalers have announced the discontinuance of the zone system of marketing gasoline in Alberta and other prairie provinces. In future gasoline prices will be based on the refinery price plus transportation cost to the point where the gasoline is sold. As a consequence there will be considerable variation in prices at different points, with prices lower along the international boundary and higher in the north.

Under the new scale, standard gasoline at Calgary is 22½ cents wholesale and 31½ cents retail, including tax; and Ethyl Gasoline 33½ cents retail; these prices being one-half cent below previous figures. Lethbridge retail price is given as 32½ cents for standard and 34½ cents for Ethyl.

Compressed Air Used to Clean Clogged Pipe Line

By ELTON STERRETT
Longview, Tex.

Although one pipe line company anticipated paraffin deposits in the suction and pressure lines of its crude oil system and made preparation for combatting them, it seemed to come as a complete surprise when that same crude, working past pump plunger packing in the main line station, eventually built up paraffin dikes in the drain lines leading to the sump.

Gas, evaporating from waste oil in the station gathering pits, first gave notice of the trouble. Investigation showed that the 6-inch trunk was clogged, as once the sump was pumped below its outlet, no flow was visible.

To clear the lines, hot jacket circulating water was siphoned from one of the gas engines powering the station and one after another of the gathering pits flooded to just below floor level. Contrary to expectations, this added hydrostatic head failed to budge the obstruction. The many branched station drain system twisted and turned to dodge foundations, pipe lines and buried conduits to hold its grade, and was far too crooked and too long to permit probing with a wire.

An extensive digging, tunnelling and welding job appeared needed, the alternative being to secure a portable boiler—all station power being internal combustion engines and electric motors—and attempts to steam out the lines.

To remove the obstruction the senior night engineer decided to go to the stock racks, and get several joints of half-inch pipe. A temporary line was laid to the compressor normally used to furnish starting air for the engines. The outer end of the line connects into a blind 6-inch flange drilled and tapped to fit one-half inch pipe, and clamped to the sump or outlet end of the drain system.

Filling each gathering pit to above the top of its outlet drain to prevent possible spewing, the "jammer" was started. Within three minutes air bubbles made their way past the dike, appearing in the various pits throughout the station. Two solidly plugged branch lines made it necessary to block off drains in the other pits and thus concentrate the pressure on the stubborn paraffin plugs but they, too, quickly yielded to the push of the air. When the flange temporarily closing the main was removed all lines washed clean.

Total expense of the air purging may be computed solely as the negligible cost of power to run the compressor during the short time required, as the half-inch pipe was cleaned and restored to the racks, as serviceable as before being borrowed.

Supreme Court Decision in Kansas Gas Rate Case

WASHINGTON, D. C., Jan. 9.—The Supreme Court of the United States has set aside a decree of a lower Federal court enjoining the orders of the State Corporation Commission of Kansas limiting amounts of payments to parent companies which nine local gas companies could charge as expense.

The case involved the Wichita Gas Co. and other local distributing companies serving 128 towns, and Cities Service Gas Co., all being subsidiaries of Henry L. Doherty & Co. After investigation the commission in September, 1932, issued an order requiring distributing companies to cease setting up as an expense item in figuring costs for domestic rates a charge of 1¾ per cent of gross earnings paid the Doherty company and anything over 30 cents per 1,000 feet city gate rate paid to Cities Service Gas Co. for gas carried interstate.

A second order required that all payments above a 30-cent city gate rate be returned to consumers through lower rates, but the commission admitted this order was illegal and the Supreme Court did not pass on it.

ROCKY MOUNTAIN FIELDS

Estimated daily average production in the week ending January 6 was as follows:

WYOMING

	Bbls.
Salt Creek	18,200
Big Muddy	1,680
Badger Basin	40
Byron-Garland	410
Byron-East	10
Dallas Derby	310
Dutton Creek	100
Elk Basin	540
Ferris	0
Frannie	230
Grass Creek	660
Greybull	10
Hamilton Dome	630
Hudson	220
Labarge	960
Lance Creek	140
Lost Soldier	1,570
Mule Creek	shut in
Midway	70
Notches	shut in
Oregon Basin	1,300
Osage	890
Pilot Butte	30
Rex Lake	shut in
Rock River	1,640
South Casper	shut in
Poison Spider	shut in
Teapot	20
Warm Springs	shut in
Total	29,660

MONTANA

Buckley-Border	410
Cat Creek	640
Cut Bank	1,180
Dry Creek	400
Kevin-Sunburst	3,430
Lake Basin	50
Pondera	460
Total	6,620

COLORADO

Florence	280
Fort Collins and Wellington	620
Iles Dome	920
Moffat	520
Orchard	110
Rangely	80
Tow Creek	210
Total	2,740

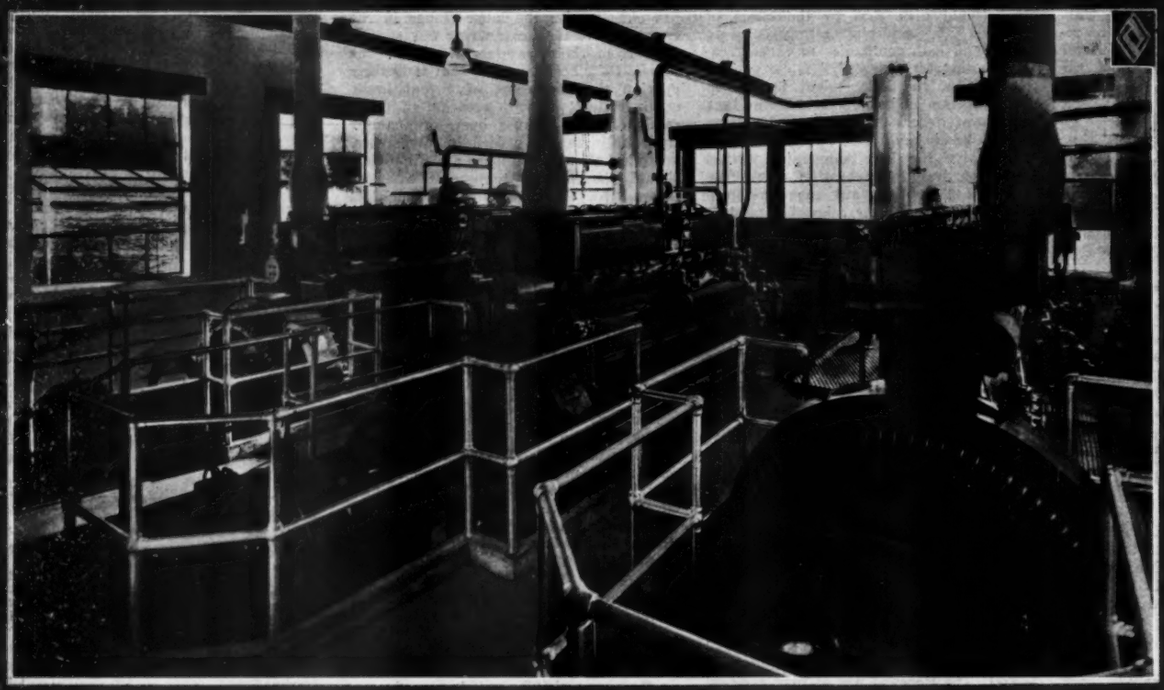
NEW MEXICO

Artesia	620
Cooper area	160
Empire area	0
Eunice area	1,190
Getty Pool	0
Hobbs	33,470
Hogback	200
Hospah	shut in
Jal	1,590
Lea area	2,040
Jackson	1,020
Maljamar	200
Rattlesnake	810
Table Mesa	90
Total	41,390
Total all fields	80,410
Total previous week	78,850
Difference	1,560

DEATH OF JOHN J. MADDEN

John J. Madden, 70 years of age, died in Tulsa Sunday. Mr. Madden came to Tulsa in 1911 as manager of the Osage Oklahoma Gas Co. He retired two years ago on account of ill health. He was last employed by the Safeway Air Lines as auditor.

THERE IS A COOPER-BESSEMER DIESEL ENGINE FOR EVERY OIL FIELD SERVICE



THE illustration shows three Cooper-Bessemer type JT six-cylinder Diesel engines direct driving 60 cycle alternators for Atlantic Pipe Line Company at Mt. Enterprise, Texas. The engines are rated 340 H.P. at 400 revolutions. The electric power generated is used to drive oil line pumps. Four additional duplicate units were installed in two separate but similar stations at the same time. These engines are operating on East Texas crude oil.

The Cooper-Bessemer Diesel line now includes sizes from 30 H.P. to 1200 H.P., ranging in speed from 200 to 1200 revolutions and suitable for drilling, pumping, direct driving oil line reciprocating or centrifugal pumps and driving electric generators for central station power. They are thoroughly modern and are backed by a company which has specialized in the building of engines for one hundred years. Call our nearest branch office for any information you may need on Diesel engines or gas engines for any oil or gas field service.

THE COOPER-BESSEMER CORPORATION

MT. VERNON, OHIO — GROVE CITY, PENNSYLVANIA

201 East First Street, Tulsa, Oklahoma — 1313 Magnolia Building, Dallas, Texas — 640 East 61st Street, Los Angeles, California — Suite No. 301, 25 W. 43rd St., New York, N. Y.

BRANCH OFFICES IN ALL PRINCIPAL OIL FIELDS

COOPER-BESSEMER

Diesel Engine Powered Electric Generators Used Efficiently in Modern Pipe Line Pump Station

By L. M. GOLDSMITH
Vice President and Consulting Engineer, Atlantic Pipe Line Co.

In November, 1932, there was placed in operation at Zavalla, Tex., a new type of pipeline pumping station, wherein Diesel-electric drive was employed for electric generation for the supply of power for electrically driven centrifugal pumps.

This pumping station, together with the initial electrically driven pumping station, where purchased power was employed, at Horton station, near Longview, Tex., on the Atlantic Pipe Line Co.'s East Texas pipe line, gave to this line a capacity of 31,000 42-gallon bbls. per 24 hours.

In March, 1933, it was decided to increase the capacity of this pipe line to 42,000 bbls. per 24 hours and, on March 24, 1933, orders were placed and drawings were started for the design of an addition to Zavalla station and two additional stations to take care of this desired capacity.

On May 27, 1933, the first of these units was put in operation and the job completed and pumping at the rate of 42,000 bbls. a day on June 10; thus the three power plants were installed, together with the pumping equipment and piping incident thereto, in a total of 68 working days from the time the first order was placed, which we believe to be an all-time record and the writer wishes to here pay the greatest tribute possible to the Atlantic Pipe Line Co.'s field organization for such a remarkable accomplishment.

Forms of Power

Before going into the description and details of these stations, we think it well to dwell upon the considerations of the form of power and some explanation of why it was decided to generate our own power.

In the first place, a multiple engine generating plant offers a primary flexibility to the power company wherein a fair rate is offered. It is this flexibility in relation to purchased power plus the flexibility of operation themselves which led us to the decision for electric generating stations.

The stations we will designate as Mount Enterprise, Zavalla and Silsbee and, for simplicity, will describe in detail the Mount Enterprise station, the exterior of which is shown in Photo No. 1 and the interior of which you will find in Photographs 2 and 4.

The general arrangement plan of the engine room is shown in Cut No. 2 and it will be noted that this entire power plant is laid out in a room 52 feet long by 34 feet 6 inches wide, yet there is plenty of room around all of the machinery for maintenance and operation.

This station consists of three Cooper-Bessemer 11½-inch bore by 15-inch stroke, 340-horsepower, solid injection Diesel engines, running at 400 r.p.m., directly connected to a General Electric

Photo No. 1—Mount Enterprise station

fly-wheel type alternator, Type ATI-6305-H frame, 225 kilowatts, 400 r.p.m., with a direct-connected exciter on each shaft of 20-kilowatt capacity, operating at 125 volts. The generators are, of course, arranged for parallel operation, and the exciters are arranged in the following manner. One exciter can be used for excitation of all the generators and any one exciter can be used for auxiliary purposes in the power station, so that all auxiliaries in the station are direct current and, therefore, the water pumps, etc., can be operated prior to the engines being synchronized.

It is interesting to note that a special governor arrangement was worked out for these engines, giving a maximum variation in speed of 3 per cent, and it is possible, therefore, easily to synchronize the engine without the use of motor-driven controls on the governor. To accomplish this, an original device was invented that may be of much interest to the readers and will be described below:

Any internal combustion engine has a definite "no-load" and "full-load" speed. Therefore, if one engine is running up to load and it is desired to synchronize the second engine with it, having no load, it is obvious that the oncoming engine must be brought down to the full-load speed of the engine on the line. It has been the practice heretofore to juggle one engine with the other until this point is reached and it is here that this novel device comes into play. A Veeder counter was geared to the governor control shaft of each engine and set at zero for the no-load speed. Observations were then made to determine the reading for full load. It is seen, therefore, that the number for the proper governor setting of the engine at full load is known and, in order to synchronize, it is merely necessary to get the proper number on each Veeder counter and the engines are then running at the same speed. As soon as the Veeder control of each engine records the same number, the engines are perfectly synchronized and will automatically divide the load equally. This device removes all personal error and even the most inexperienced operator can synchronize the engines.

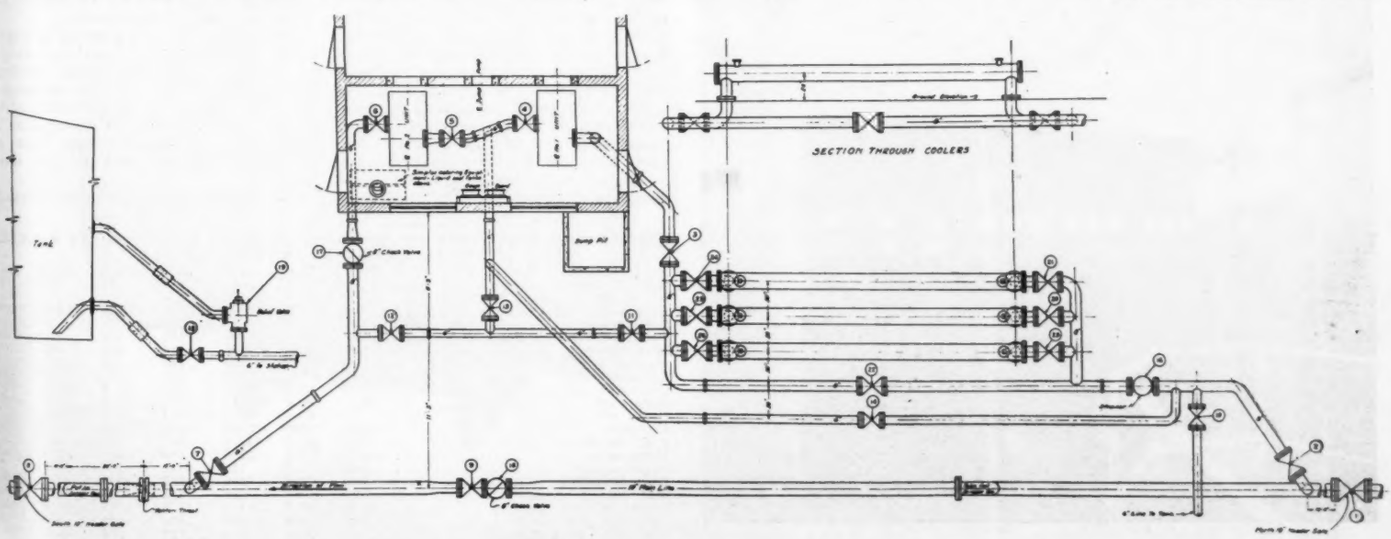
Directly back of the switchboard, and in the same building, are located the two 350-horsepower, 2,600 r.p.m. General Electric induction motors, as shown on Photograph No. 5. The drive shafts of these motors pass through the rear wall of the building, properly protected by stuffing boxes, and then in the extension of the building, shown on Photographs Nos. 1 and 7, are located the Byron Jackson multistage centrifugal pumps. The arrangement of piping of these pumps is shown diagrammatically, in Cut No. 1, on which the very simple piping arrangement will be immediately apparent. By this method of piping, the station can be shut down without touching a valve and the stream will open the check valve and go right on through to the next station.

Another feature of these pumping stations which we have found to be of very great advantage is the installation of a venturi meter at each station. This is of great assistance in starting up, so that packing of the line is shown by means of measured flow rather than by merely indications of pressure and by holding the flow down to normal rate, surges are avoided on subsequent stations.

We have also found this venturi indicator, which was manufactured by the Simplex Valve & Meter Co., of Philadelphia, to be very helpful at stations where power is purchased and the operators can be instructed to hold the flow down to a definite quantity and thus prevent the creating of a high demand, as shown by the electrical demand meters of the station.

Prime Mover Cooling and Fuel Systems

The cooling system for these Diesel engines consists of three Griscom-Russell heat exchangers located on the suction side of the station. These are designed in such fashion so that to vary the temperature of the water going through the engines, the amount of crude oil through the cooler is varied rather than the amount of water. The purpose of this arrangement was to keep the quantity of water circulated through the engine constant and thus assure an efficient cooling system. Probably a great deal of the trouble that has been experienced in the past in many Diesel stations is due to scale forming as a result of a reduced quantity of water being circulated, thus causing local high temperature in the head. This high temperature of the cir-



Cut No. 1

culating water in the head produces scale formation with the usually well-known result.

These coolers are arranged above ground and so piped that the tube bundle can be pulled for cleaning, without the removal or changing of any piping.

The circulating water is supplied by three Cameron motor-pumps, each designed for 150 gallons per minute 2t 65-foot head, one being for each engine.

Photo No. 2—Engine room

The fuel system is composed of fuel oil storage tanks, day or feed tanks and a means for flushing the line. All the fuel requirements are met by taking crude directly from the main transportation line.

Each main fuel or storage tank has a capacity of 20 bbls. and is built on an individual tower 20 feet high. Tanks are equipped with Oceco fittings. The fuel is received into these tanks directly from the main line through a pipe connection of small diameter and through a cleverly devised vaporizer in the head of the tanks. The purpose of this vaporizer is to liberate the first wild gases and thus stabilize the fuel.

Inside of the power station is one daily fuel tank of 3½ bbls. capacity. Installed in this tank is a float controller which automatically keeps this full, being supplied from the overhead storage tank. In this way, there is a continuous flow of crude oil from the outside overhead tank to the inside daily service tank and this flow prevents congealing of the lines in cold weather. Liquid level controls were furnished by Fisher Governor Co.

The air compressor is an Ingersoll-Rand, Type 30, two-stage, motor driven, capable of supplying 250 pounds starting air.

The engine lubricating oil is purified by a Model 30-D Hydroil centrifuge.

Emergency lighting is provided for by a 5-k.w., Kohler gasoline engine driven direct connected generator, which is also capable of supplying current for air compressor, water pumps and lubricating oil centrifuge when main units are off the line.

Another departure from pipe line practice that may be well worth mentioning is the materials of construction in both the generating station and the pipe line station. The buildings are all of cement block with concrete roofs, using steel window frames and are entirely of fireproof construction, as the Atlantic Pipe Line Co. believes that, since it uses the best equipment it is possible to obtain, it is only proper to use the best building materials.

It is most impressive to the visitor to observe the extreme simplicity of this installation and we believe it is only a matter of time when these basic principles will be widely in practice.

The starting of the two 350-horsepower motors from three 225 k.w. generators presented a very interesting problem which was worked out as follows:

Notwithstanding the fact that the starting current for such motor is 300 per cent of normal, it is possible to start one motor from one engine and without going into the technical details of the electrical apparatus, very briefly, it is done in this manner:

When it is desired to run one pump from one engine, this motor is thrown directly across the line without a compensator. Due to the design of the generator, the reduction in voltage by throwing this motor across the line is equivalent to the reduction in voltage of the compensating starter and, as the motor gets away, the generator voltage is recovered until the motor is up to full speed. With this motor running, now, when it is desired to start the second pump, naturally another engine or two more are synchronized on the line. It can be seen, then, that it is not practical to throw the second motor across the line, because there will not be the natural reduction in voltage, due to the generator capacity across the bus and the second motor, therefore, is started through a compensating starter directly on the switchboard and the entire arrangement is so interlocked that the first motor must always be started across the line but when it is so running it is impossible to start the second motor without the use of the compensating starter, thus making the entire system foolproof from an operating standpoint.

We also found it undesirable to parallel the exciters due to the liability of motoring same and it is possible to select any exciter for auxiliary duty and any exciter for excitation duty. Should it be necessary, however, to shut an engine down that is carrying either the excitation or auxiliary loads, we have designed a very simple device. Any two exciters can be momentarily paralleled by holding in a button and the load changed to the oncoming machine and the other machine shut down as desired. All of these operations can be accomplished without any interruption to the service or to the operation of the pipe line pumps, and then when the above mentioned button is released the exciters are again operating independently.

Centrifuge

The lubricating oil is purified by means of a Goulds Hydroil centrifuge, shown in Photograph No. 8 and the centrifuging of this oil is carried on continuously. The lubricating oil for each engine is kept separate and the centrifuging is accomplished by alloting eight hours of operation daily to each of the three engines.

We believe this continuous centrifug-

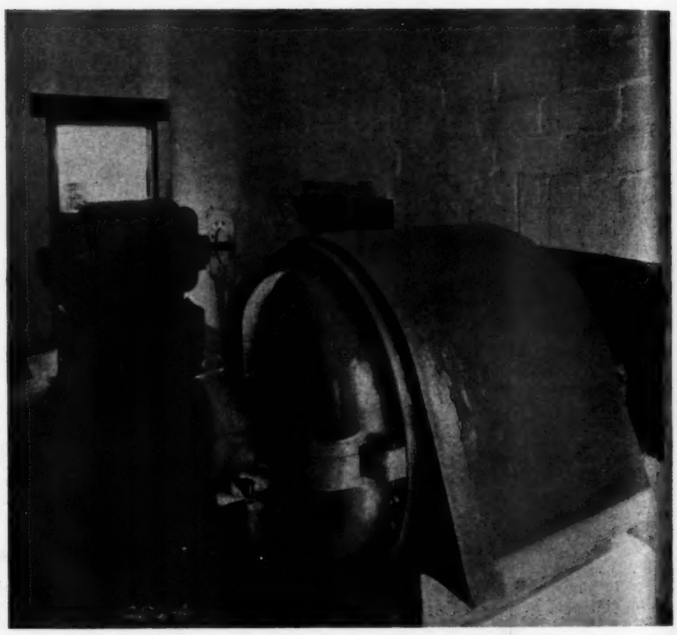


Photo No. 5—350-horsepower motor for main line pumps

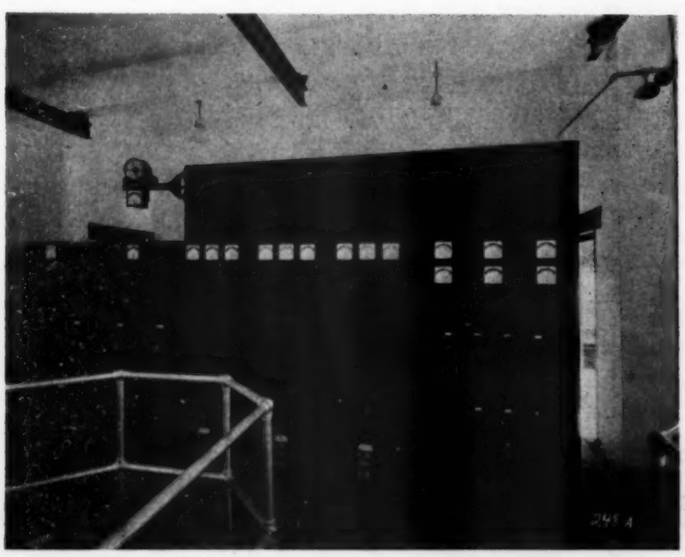
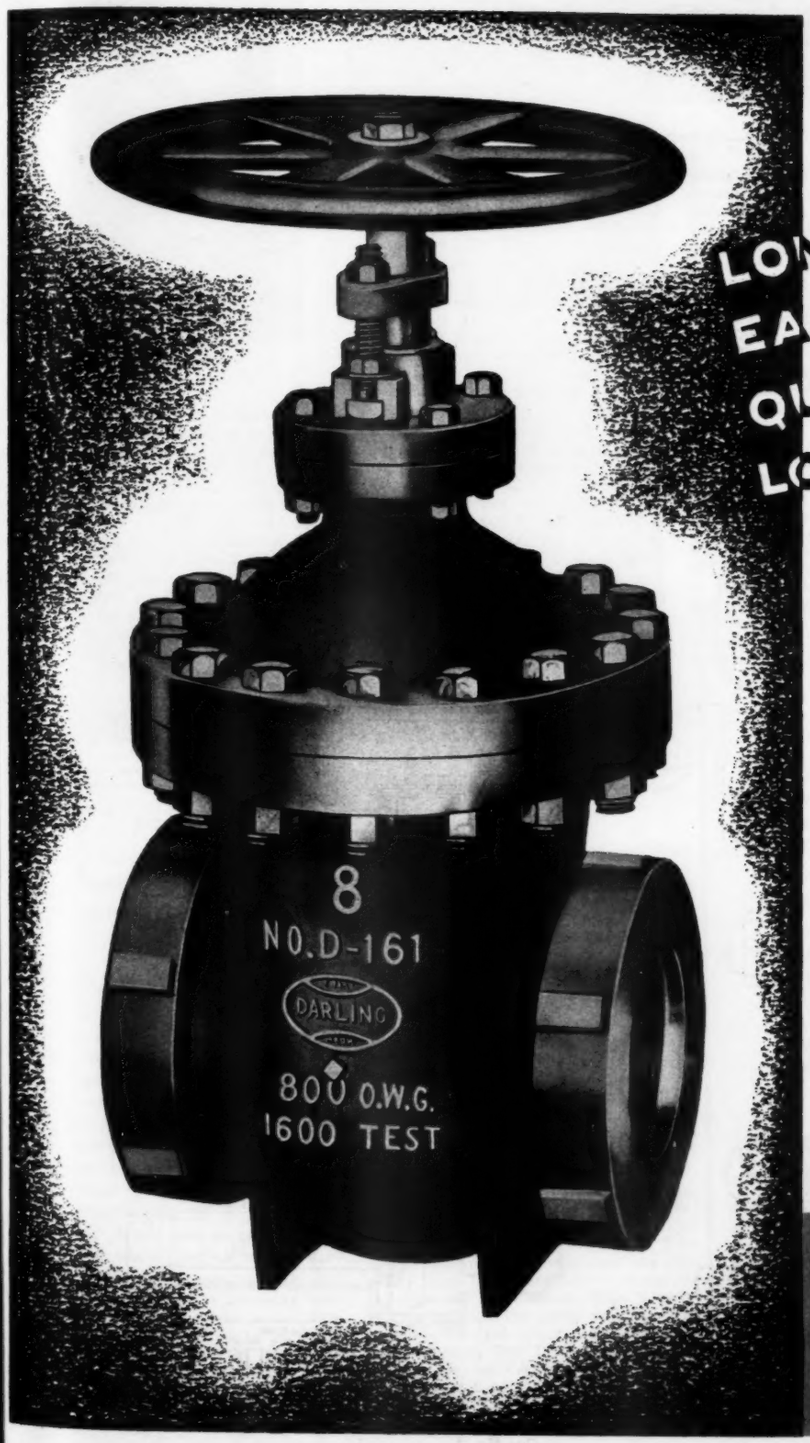


Photo No. 4—Main control panel and switchboard

COMPARATIVE EFFICIENCY OF CENTRIFUGAL PUMPS OPERATING AT REDUCED SPEED VS. THROTTLED DISCHARGE VALVE

Test run—	No. 1	No. 2	No. 3	No. 4	No. 5	No. 6	No. 7
Gen. frequency	60	60	60	55	55	60	60
No. of engines oper.	3	3	2	3	2	2	2
Rate bbls./24 hrs.	42,100	37,489	37,578	37,486	37,466	34,567	34,616
Suc. pressure	120	15	15	15	15	15	20
Dis. pressure	767	720	720	595	595	730	460
Line pressure	767	595	595	595	595	495	490
Hydraulic H.P.	465	368	369	368	369	280	277
Hydraulic KW.	349	274	276	275	274	209	206
Combined eff. motor and pump	76.3	61.9	61.4	75.6	76.6	49	74.8
Motor eff.	92.4	92.2	92.2	90.7	90.7	92	90.9
Pump eff.	85	67.1	66.6	82.4	83.4	53.3	82.3
AC volts	2,300	2,300	2,300	2,200	2,200	2,309	2,100
KW. per hour	530	442.9	448.8	363	362	427	274
Motor speed	3,560	3,565	3,565	3,270	3,270	3,560	2,969
Motor amps.	132	127	129	110	110	123	92
Engine speed	400	400	400	365	365	400	333
H.P. output engines	695	663	654	564	546	632	436
Brake M.E.P.	49.2	47.2	69.2	43.7	63.4	65.8	64.5
Lbs. fuel per H.P.H.	.432	.458	.434	.460	.412	.432	.417
Lbs. fuel per KW.H.	.580	.690	.632	.712	.616	.638	.658
Lbs. fuel per bbl. oil pumped	.173	.196	.181	.166	.144	.189	.126
KW.H. per bbl. oil pumped	.302	.281	.287	.233	.233	.298	.190

MAKE a mental note of what you require in a valve for your particular work and compare it with what we say of Darling, and then ask any user how nearly right you will be in equipping throughout with Darlings.



LONG WEARING
EASY OPERATING
QUICK REPAIR
LOW ULTIMATE COST

Darling Valve & Mfg. Co.
Williamsport, Pa.
New York Oklahoma City Houston

Mid-Continent Distributor:
International Supply Co.

California Distributor:
Hickey Pipe & Supply Company
3375 East Slauson Av.
Los Angeles, Calif.

DARLING
GATE VALVES

ing of the oil to be a most important feature and our cycle of operation and size of centrifuge is at least three times greater than is normally recommended. An examination of the bearings in the engines of this station, after a continuous operation of six months, has proven the value of this procedure by the fact that it was impossible to measure any bearing wear after this period of operation.

In the past, when centrifugal pumping stations, operated by induction motors, had been operated, there have been two general methods used to obtain the highest possible efficiency: (1) To run the station at the designed rated per maximum efficiency on the impeller of the pump, and (2) to vary the speed of the pump and so change its characteristics to attempt to hold this efficiency at a variation in capacity, or to change impellers. It is not always practical to change impellers because it may not be desired to run for very long at the capacity other than the rated and, in this event, the pumping stations are throttled back to obtain the desired capacity. The latter is usually done where power is purchased and we will show, later, just what is accomplished by both methods.

When operating at the rated capacity of 42,000 bbls. per day, this station pumped a barrel of oil at 767 pounds pressure, for .173 pound of crude oil burned in the engine, as indicated in data test sheet, Test No. 1. A series of tests were then conducted, shown as Test 2, first, by pumping 37,500 bbls. per day and the generators were running at 60 cycles frequency and the capacity obtained by throttling back on the pump designed for 42,000 bbls. per day.

A similar test was then run, as per Test 3, all conditions being the same, except that two engines were used, instead of three. Next test, No. 4, was made with three engines operating at 55 cycles and pumping 37,486 bbls. per day. Test No. 5 is the same as No. 4, pumping 37,466 bbls. per day, except two engines only were used.

A test was then run, known as No. 6, at 34,500 bbls. capacity, and at 60 cycles, by the throttling-in method and then the same capacity at 50 cycles, shown in test No. 7, when the engines were run at 333 r.p.m. No. 3 engine test was run under these conditions due to greatly reduced load.

A study of these results shows quite clearly the efficiency of these various methods.

When pumping 37,500 bbls. of oil at 60 cycles and throttling in, using three engines, it required .196 pound of fuel per barrel of oil pumped and with two engines, .181 pound of fuel per barrel of oil pumped. When, however, the generators were run at 55 cycles, slowing down the pumps to get the same capacity, it required only .144 pound of fuel per barrel of oil pumped, a direct saving of over 26 per cent when running three engines at 60 cycles, and 19½ per cent when running two engines at 60 cycles.

It is interesting to note that between these two methods there was a difference in pump efficiency of over 16 per cent and, when running at the 34,500-bbl. capacity, a difference of pump efficiency of 29 per cent. The fact that it is possible to run at reduced capacity on two engines we believe to be very significant because, when conditions arrive at the point where that is the maximum desired capacity of the line for a considerable period, the engines not required can be moved to another location for useful service, whereas the remaining engines still run at a very good load and at their highest efficiency.

We are presenting this data in the form as shown, rather than in curve form of any kind, as we do not wish to make this article highly technical but do wish to set forth the facts just as they are

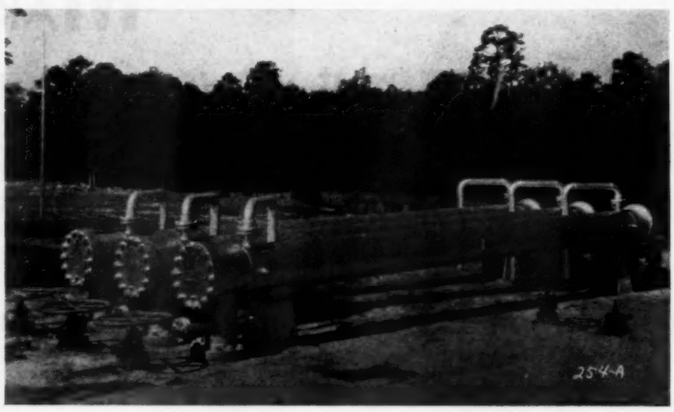
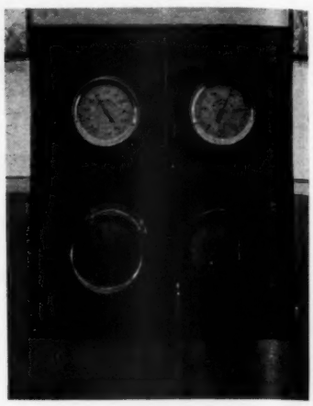
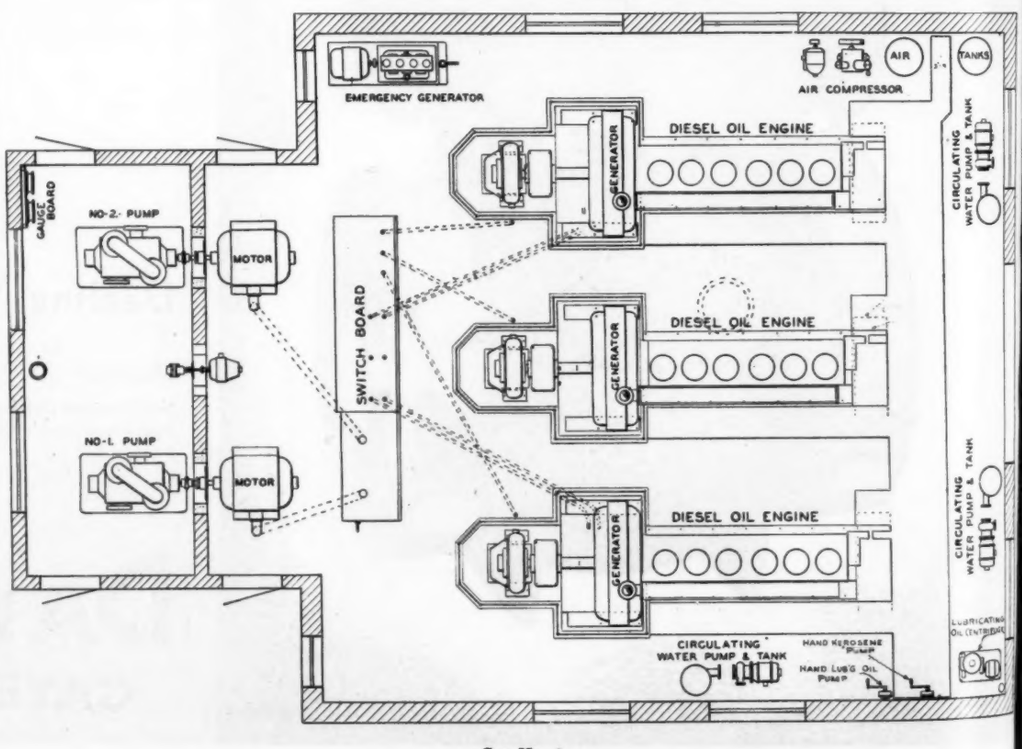


Photo No. 6—Circulating water coolers



Pump room gauge board



Cut No. 2

Atlantic Pipe Line Co. *Safeguard* their installations with Oceco Fittings

THIS is one of the OCECO equipped tanks in the new electric pipe line installation for the Atlantic Pipe Line Co. running from East Texas to the Gulf Coast.

This progressive company knows by many years experience that OCECO Fittings provide the protection so essential wherever oil is stored by minimizing evaporation losses and preventing fire.

THE OIL CONSERVATION ENGINEERING CO.
877 Addison Road
CLEVELAND, OHIO
Engineering and Sales Service:
90 West Street, New York
Box 552, Beaumont, Texas
1031 S. Xanthus Pl., Tulsa, Okla.
Marquette Bldg., Chicago, Ill.

OCECO FITTINGS

and as we observed them and anyone interested can use this information for making their own calculations and drawing their own deductions from same.

We have been requested many times to state what it costs us to generate a kilowatt at this station. Because it would not be fair to give the entire matter in detail, due to costs, etc., which we are not at liberty to disclose, we will, however, give a tabulation below, which will enable any operator or one interested to figure out the cost for himself:

SILSBEE STATION—MONTH OF SEPTEMBER, 1933

KW.H. generated	363,990
Fuel oil used in bbl.	785
Lub oil used in gal.	199
Cost fuel oil at $1.075 per bbl.	$843.88
Cost lub oil at 43 cents per gal.	85.58
Labor cost	645.00
Cost of supplies	55.00
Operating cost	$1.629.46
Cost per KW.H.	$.0045

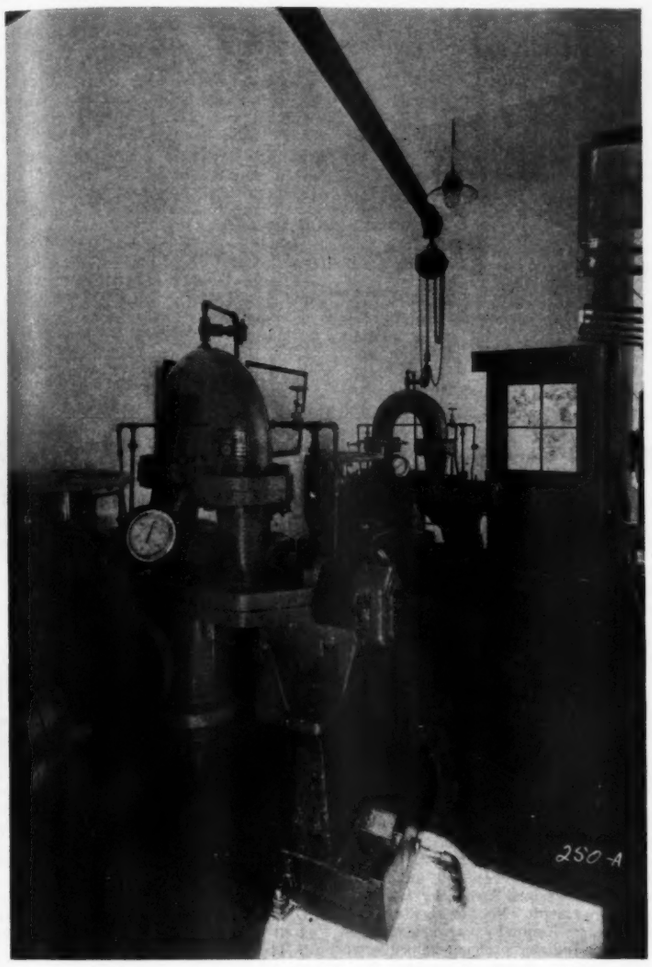


Photo No. 7—Main line pump room

Sinclair Company Rebuilds Refinery at Fort Worth

(Continued from Page 12)

gravity fuel oil which is utilized as plant fuel.

Open Type Pump House

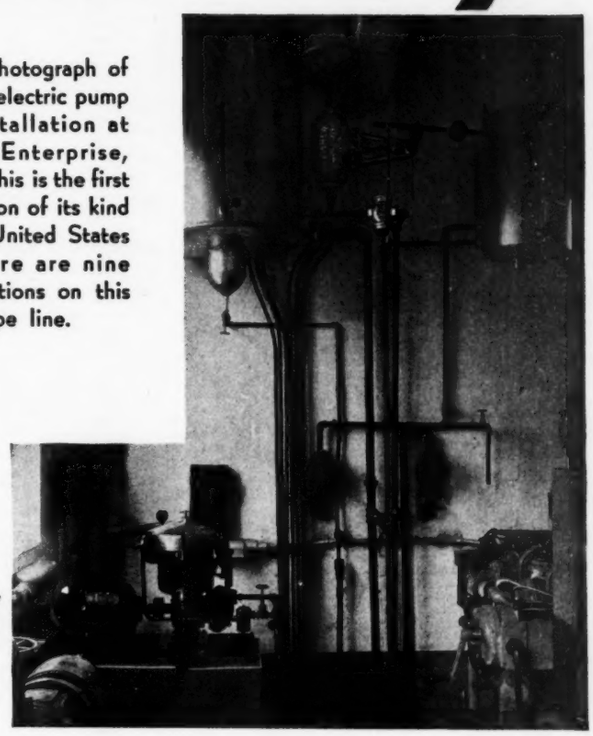
From the main fractionating tower the endpoint pressure distillate is taken to storage. Before chemical treatment the pressure distillate is run to the debutanizing unit where the desired fractions for motor fuel are obtained. In this connection as shown in the accompanying photograph an open type pump house is used in operating the debutanizer and stabilizer. The building is all metal with open sides. With certain crudes in a closed pump house, there is a hazard to operators due to hydrogen sulphide gas. The open sides assure the necessary ventilation so that the gases do not accumulate in sufficient quantities to be harmful. It will be noted that the pumps are of special design to handle gases. These pumps are designed so that the gas is removed automatically thus preventing vapor binding in the pumping operation.

At the main fractionating tower a side stream is removed. This cut has specifications suitable for furnace oil. Where there is a large seasonal demand for this product a wide cut can be taken. When it is not required by the marketing department the cut can be left in the tower and added to the gas oil cracking stock which is removed continuously from the base of the main tower. This gas oil from the tower is charged to the tubes of the cracking coil by a cross compound condensing hot oil pump. This operation is varied slightly when virgin gas oil is used as cracking stock. In the reforming operation the naphtha cut from the crude stills passes direct to the tube stills through liquid and vapor heat exchangers.

An unusual feature of the cracking operation is the method used to recover the gasoline from the wet gas removed from the top of the fractionating tower. This gas is taken to an adjoining absorber where it contacts continuously a gas oil cut from the main tower. This is recirculated through the tower and the light gasoline removed along with the pressure distillate. The fixed gases, including any butane not desired in the gasoline, are removed from the top of the absorber and used as plant fuel.

Again FISHER EQUIPMENT is selected for its RELIABILITY

Actual photograph of a Diesel electric pump line installation at Mount Enterprise, Texas. This is the first installation of its kind in the United States and there are nine such stations on this pipe line.



HERE is, in this issue, a detailed description of this new development. Nine such stations are installed on this pipe line and in each, Fisher Liquid Level Controls as shown in the above photograph were used. An engineer who is pioneering in a new field, experimenting with a new problem can hope for success, but cannot assure it except by using theories and equipment of known value. The reliability of Fisher products and their well-earned reputation as leaders in their respective fields, influenced this company in an endeavor to insure the success of their new venture.

You may safely consider Fisher "the Standard" by which you judge liquid level controls, pump governors, steam traps, reducing valves, pressure regulators, strainers, float valves and similar equipment. Fisher engineers will gladly help you solve any control problem and select the product that will serve you most efficiently. Write today for the new Fisher catalog.

FISHER
The Mark of Scientific Fluid Control

Fisher Governor Company

1015 SANTA FE AVENUE, LOS ANGELES, CALIF. — 30 CHURCH STREET, NEW YORK, N. Y.
201 SOUTH FIRST AVENUE, MARSHALLTOWN, IOWA

January Mid-Continent Crude Runs Continue to Increase

(Continued from Page 8)

daily runs of 525,845 bbls. were scheduled for the Mid-Continent area.

Construction of a cracking unit by the East Texas Refining Co. at its Henderson plant will start soon, according to a statement of Freeman Burford, head of the company. The unit is to be completed next spring.

The Omega Refining Co., Brownwood, Tex., has begun operating on 42-gravity crude transported by truck from the Centennial Oil Co.'s Matthews lease in the northwestern part of Coleman County. The plant, with a daily skimming capacity of 200 bbls., is at present running 110 bbls. daily. The Omega, which is owned by W. C. Lightfoot and others of Brownwood, was formerly the Bluebonnet Refining Co.

News was received the last week that the Boynton, Okla., plant of the Marathon Oil Co. had been sold to the Sonken-Galamba Corp., of Kansas City, Mo., and would be dismantled. This refinery, formerly owned by the Transcontinental Oil Co., predecessor of Marathon, was shut down in the fall of 1930 and had not been running since then. When in operation it regularly used 2,000 bbls. of crude daily.

EAST TEXAS

Company and location—	Daily capacity	Aver. daily runs Jan.	Aver. daily runs Dec.
Alamo Refining Co., Camps Switch	2,500	(*)	(*)
Arpana Refining Co., Arp	4,000	3,500	3,200
Arrow Refining & Producing Co., Overton	3,500	3,100	1,200
Beacon Oil & Refining Co., Henderson	4,500	2,900	2,900
Canyon Refining Co., Kilgore	500	700	400
Carnation Refining Corp., Gladewater	600	575	550
Century Refining Co., Friars Switch	2,000	1,350	700
Chief Refining Co., Gladewater	1,500	775	870
Danciger Refineries, Inc., Longview	10,000	(*)	(*)
Duckworth & Chandler Refining Co., Gladewater	100	170	100
East Texas Refining Co., Longview	10,000	6,000	8,000
Foshee Refining Co., Gladewater	1,000	(*)	(*)
Gladetex Refining Co., Gladewater	500	500	100
Gladewater Production Co., Gladewater	200	(*)	800
Gilliland Refining Co., Gladewater	1,500	1,150	800
Gilmer Refining Co., Gilmer	500	(*)	(*)
Godlin Refining Co., Gladewater	500	50	(*)
Goodson-Gentry Refining Co., Gladewater	1,200	1,100	100
Gulf Refining Co., Sweetwater	5,000	4,000	4,000
Henderson Refining Co., Henderson	12,000	(*)	(*)
Hix-Keller Refining Co., Kilgore	1,000	500	400
Humble Oil & Refining Co., Chilton	4,000	(*)	400
Humble Oil & Refining Co., Neches	5,000	(*)	600
Johnson Refining Co., Kilgore	500	500	100
Johnsonville Refining Co., Omega	200	75	(*)
Kent Refining Co., Angus	4,000	(*)	(*)
Kent Refining Co., Minerva	2,000	200	(*)
Kilgore Refining Co., Kilgore	3,000	1,600	1,500
Lake Refining Co., Gladewater	1,000	1,000	900
Laperein Refining Co., Kilgore	1,000	625	600
Locke Refining Co. No. 1, Gladewater	1,500	1,000	1,300
Locke Refining Co. No. 2, Gladewater	1,500	800	(*)
Lotus Refining Co., Gladewater	1,500	500	500
Magnolia Petroleum Co., Corsicana	5,000	2,700	2,500
Master Petroleum Co., Waco	1,000	300	300
O. K. Refining Co., Kilgore	1,000	(*)	70
Oil Refineries, Inc., Overton	4,000	3,000	2,400
Oriental Oil Co., Dallas	5,000	1,000	1,000
Overton Refining Co., Overton	3,500	2,200	2,300
Owl Refining Co., Kilgore	1,800	1,800	1,000
Owl Refining Co., Arp	1,000	1,000	...
Panama Refining Co., Kilgore	1,000	1,000	950
Pennant Refining Co., Kilgore	1,000	525	400
Phoenix Refining Co., Inc., Dallas	1,000	500	500
Reclz Refining Co., Turnerstown	200	(*)	(*)
Rusk Oil & Refining Co., Overton	3,000	1,700	1,500
Sandy Refining Co., Big Sandy	1,000	400	...
Simms Oil Co., West Dallas	4,000	3,000	2,550
Sinclair Refining Co., Camps Switch	5,000	1,600	1,700
Solar Refining Co., Overton	3,000	900	870
Southern Refining Co., Reeds Switch	2,500	(*)	(*)
Southport Refining Co., Kilgore	1,500	1,700	1,500
Supreme Refining Co., Gladewater	1,000	750	300
Taylor Refining Co., Tyler	15,000	(*)	300
Texas Co., Dallas	16,000	9,600	9,600
Texas Oil Products Co., Gladewater	2,000	700	700
Texas Refining Co. No. 1, Kilgore	1,000	(*)	650
Texas Refining Co. No. 2, Gladewater	500	200	400
Trico Refining Co., Turnerstown	200	(*)	200
Trinity Refining Co., Gladewater	1,500	575	280
Trio Refining Co., Arp	1,000	550	(*)
Tyler Refining Co., Arp	1,500	1,300	1,050
Union Refining Co., Camps Switch	3,000	1,500	1,900
Unit Refining Co., Kilgore	200	(*)	(*)
Upshur Refining Co., Gladewater	500	600	300
Total	176,700	71,570	66,190

*Shut down.

NORTH CENTRAL TEXAS

Company and location—	Daily capacity	Aver. daily runs Jan.	Aver. daily runs Dec.
All State Refining Co., Thrall	2,300	1,100	1,100
Archer Refining Co., Megargel	1,500	400	400
Atlantic, Pacific & Gulf Refining Co., Wichita Falls	5,000	500	1,500
Continental Oil Co., Wichita Falls	6,000	4,500	3,600
Empire Oil & Refining Co., Gainesville	5,000	2,600	2,100
Exchange Petroleum Corp., Albany	500	225	250
Falls Refining Co., Wichita Falls	2,000	200	200
Gratex Refining Co., Graham	500	150	150
Gulf Refining Co., Fort Worth	10,000	5,000	5,000
Haskell Oil Refining Corp., Breckenridge	200	100	100
Jacksboro Refining Co., Jacksboro	50	10	10
LaSalle Petroleum Co., Burkburnett	3,500	400	400
Magnolia Petroleum Co., Fort Worth, No. 1	12,000	4,800	5,000
Magnolia Petroleum Co., Fort Worth, No. 2	6,000	(*)	(*)
Marathon Oil Co., Fort Worth	5,000	3,900	1,200
Moutray Refining Co., Hawley	600	275	275
Muenster Refining Co., Muenster	300	110	30
Nolting Refining Co., Sweetwater	1,000	350	200
Octane Oil Refining Co., Baird	1,400	1,175	1,350
Olney Oil & Refining Co., Olney	3,000	1,600	1,600
Omega Refining Co., Brownwood	200	110	...
Panhandle Refining Co., Wichita Falls	5,000	2,200	2,100
Paragon Refining Co., Leuders	300	200	180
Pentex Refining Co., Echo	400	(*)	50
Pilot Point Refining Co., Pilot Point	500	100	300
Sinclair Refining Co., Fort Worth	5,000	1,800	1,800
Southtex Refining Co., Trent	250	225	220
Southland Refining Co., Olney	1,000	(*)	150
Star Refining & Producing Co., Fort Worth	1,000	500	700
Starlight Refining Co., Inc., Hatchel	300	175	200
Superior Refining Co., Tiffin	300	150	50
Taylor Refining Co., Taylor	6,000	525	525
Taxman Refining Co., Wichita Falls	3,000	(*)	(*)
Texas Pacific Coal & Oil Co., Fort Worth	3,000	2,000	2,000
Texas Pacific Coal & Oil Co., Caddo	1,000	300	300
Tucker Refining Co., Wichita Falls	200	130	120
Waggoner Refining Co., Electra	6,000	2,600	3,000
Wichita Refining Co., Wichita Falls	150	(*)	(*)
White Star Refining Co., Cisco	500	150	150
Total	100,450	38,560	26,410

*Shut down.

SOUTHWEST TEXAS

Company and location—	Daily capacity	Aver. daily runs Jan.	Aver. daily runs Dec.
Bee Oil & Refining Co., Pettus	1,000	200	120
Capital Refining Co., Luling	2,500	(*)	(*)
Chapa Refining Co., Laredo	100	65	50
Grayburg Oil Co., San Antonio	6,000	(*)	(*)
Humble Oil & Refining Co., San Antonio	5,000	2,500	2,050
Magnolia Petroleum Co., Luling	7,000	3,800	3,000
Misko Refineries, Inc., Mirando City	2,500	600	750
Phoenix Refining Co., Pettus	1,000	800	620
Phoenix Refining Co., San Antonio	500	500	(*)
Pioneer Oil & Refining Co., Somerset	1,500	800	820
Price Refining Co., San Antonio	500	290	280
Texas Co., San Antonio	3,000	3,000	3,000
Texas Petroleum Products Co., Somerset	1,500	(*)	300
Total	32,100	12,555	11,000

*Shut down.

ARKANSAS

Company and location—	Daily capacity	Aver. daily runs Jan.	Aver. daily runs Dec.
Berry Asphalt Co., Waterloo	2,000	500	500
Henry H. Cross Co., Smackover	6,000	3,000	3,000
Lion Oil Refining Co., El Dorado	12,000	6,000	6,000
Macmillan Petroleum Products Co., Norphlet	2,300	1,900	2,000
Ouachita Valley Refining Co., El Dorado	1,500	1,200	1,200
Root Refining Co., El Dorado	10,000	5,200	5,000
Simms Oil Co., Smackover	3,000	2,000	2,000
Stephens Refining Co., Stephens	750	300	300
Total	37,550	20,200	20,000

NORTH LOUISIANA

Company and location—	Daily capacity	Aver. daily runs Jan.	Aver. daily runs Dec.
Bayou State Refining Co., Hosston	750	(*)	(*)
Cedar Grove Refining Co., Shreveport	1,000	900	900
Louisiana Oil Refining Co., Shreveport, Bossier	19,000	16,000	16,000
Spartan Refining Co., Shreveport	10,000	9,000	5,500
Stanolind Oil & Gas Co., Superior	3,500	2,000	2,000
Texas Co., Shreveport	7,000	(*)	(*)
Shreveport Refining Co., Shreveport	500	(*)	(*)
Total	41,750	27,900	24,400

*Shut down.

Ohio Oil Company Aids the Producers

(Continued from Page 10)

Indiana production at the new price and refiners now will be able to buy current production instead of trying to get permission to supply requirements by withdrawals from storage. There are about 17,000 wells in the Illinois-Indiana area with a daily production of about 14,000 bbls. These operators now have a market for their output at a price which is in line with crude from other districts.

In Kentucky a situation had arisen where there was 2,500 bbls. daily of production above market requirements. The Ohio Oil Co., buying in western Kentucky, had been forced, several days ago, to prorate its purchases 50 per cent. Through efforts of the Planning and Co-ordination Committee and Mr. Franklin, two refiners agreed to buy this 2,500 bbls. daily and the recently announced proration in western Kentucky has been lifted as a result. No change in price was made in Kentucky as settlement of the Illinois-Indiana problem helped solve the situation in western Kentucky.

Improvement in Domestic and Export Market Fails

(Continued from Page 23)

are those who contend that a tank car price of 5¼ to 5½ cents is out of line with the gasoline market where the third grade is selling at 6 cents or less.

Lubricants

Reports that price concessions have been given in the export and domestic movement of cylinder stocks and neutral oils are denied by the principal manufacturers. Cylinder stocks and neutral oils made from Pennsylvania Grade crude oil and Mid-Continent crude oils are actively traded in this market. The sales include all types of package goods as well as bulk sales. A substantial part of the production of western Pensylvania refineries is sold in this market usually through brokerage organizations. Due to this condition the market is usually highly competitive. The products sold include the finished motor oil and industrial lubricants.

In the export market, the prices reported on cylinder stocks in barrels range from 21 cents for 600 steam refined unfiltered oils to 32.5 cents for No. 8 color, bright stocks. These are Pennsylvania Grade oils. In the Pennsylvania neutral oils the going market for 150, 3 color is 25 to 26 cents, and 29 to 30 cents for the 200, 3 color.

Petroleum Wax

The predicted advance in fully refined wax for domestic and export movement has not materialized. The stocks of these grades are down to a minimum at eastern refineries and if any improvement in demand materializes for shipment over the next 90 days the increase in price is logical although present quotations are relatively high.

Export Gasoline

The export gasoline market was featureless over the past week. The weakness in the East Texas and Mid-Continent gasoline market is not considered a favorable development. Foreign buyers sensing this weakness are inclined to postpone purchases. Quoted prices at the Gulf Coast for cargo movement ranged from 5¼ cents for U. S. Motor gasoline to 5¾ cents for 64-66 375 endpoint. Reported quotations on European inquiries for kerosene ranged from 4¼ cents for 41-43 water white to 4½ and 4⅝ cents for 44 kerosene.

CHANGES IN COMMITTEES

WASHINGTON, D. C., Jan. 8.—The Planning and Co-ordination Committee announces that since January 1 the following changes in the personnel of the regional, state and district committees have been made:

Planning and Co-ordination Subcommittee on Production "B": Add—M. J. Delaney, president, Texas, Louisiana, New Mexico Drilling Contractors Association, Dallas, Tex.

Region No. 1 — Regional Marketing Committee: Substitute—E. F. Battson, Continental Oil Co., New York City, for R. L. Milne.

Region No. 3 — Regional Marketing Committee: Add—Norman Johnson, Park Ridge, Ill.

Region No. 3—Regional Production Committee: Add—Cecil H. Mason, Imperial Oil & Gas Productions Co., Henderson, Ky., and H. J. Lowe, Pure Oil Co., Newark, Ohio.

Region No. 4—New Mexico State Production Committee: Add—L. E. Barrows, the Texas Co., Fort Worth, Tex.; Hugh Burch, Grayburg Oil Co., Artesia, N. M.; Powhatan Carter, Roswell, N. M.; C. J. Dexter, P.O. Box 577, Artesia, N. M.; Harry Leonard, Roswell, N. M.; F. P. Rushmore, Gypsy Oil Co., Denver, Colo.; C. S. Sanders, Stanolind Oil & Gas Co., Fort Worth, Tex.

Chicago Oil Trade Is Disappointed Over Market Failure to Show Improvement

By SPECIAL CORRESPONDENT

CHICAGO, Jan. 8.—The oil trade here is frankly disappointed over failure of the petroleum markets, particularly refinery gasoline, to make a better showing thus far in 1934. While there is still a widespread feeling that a chance exists for substantial improvement a little later, resentment and criticism of the industry's regulations and their enforcement are heard frequently. Spot gasoline prices here have reached in the last few days new lows for the current decline.

Motor fuel orders, spot and contract, were in good volume immediately after the first of the year, but began dropping off when it appeared there was still too much gasoline to be absorbed immediately. With jobbers again withholding business, the gasoline offers became more insistent, concessions became more general and quite low prices were heard. This is especially true of low-grade material, but it is having some effect also on higher octane items.

Retail Markets Nervous

Tank wagon and service station price cuts are not aiding the tank car market. Most of these cuts in this region are in third-grade material, but nervousness is spreading with the growing softness of the tank car market.

Consumption of gasoline throughout the central region is holding up well for this time of year. Reports of leading major companies show such sellers are doing a good retail business. The one-half cent price cut incident to tax reduction seems to have had some slightly favorable reception from motorists, and motor traffic in cities and on highways appears quite heavy.

Refiners are offering jobbers contracts for 1934 and report a rather large-scale acceptance on terms not greatly differing from those ruling for some time past. Jobbers appear, however, somewhat hesitant to take any stand which would involve all their requirements and there is considerable hedging going on or being prepared in this regard. A considerable number of them are still apprehensive over the outcome of the pool and marketing agreements. Officially jobbers have taken no stand on the matter. Car-lot marketers, however, through the Wholesale Petroleum Marketers Association, have protested against the pooling plan which they believe would usurp their functions.

Actual ruling prices governing the bulk of the transactions are hard to ascertain. It seems that the most extreme low prices heard are those covering a limited amount of offerings, originating in distressed sources. Some low octane material has been reported around 3½ cents. High octane content material seems better composed.

Kerosene is still a backward product, although sellers see some hope for it in the approaching season. Sales have been almost completely lacking, prices about unchanged.

Burning Oils

Distillates have suffered some slight easing in tone, almost to the extent of affecting the price since the return of mild weather conditions in the central and northern states. Distributors are reported to have amassed fairly liberal stocks and are not anxious to buy more at this time. High grade gas oils likewise are hardly so firm as two weeks ago.

Shutting down additional refineries if present unfavorable price relationships between crude and refined products continue is considered as possibly a factor which might affect both gasoline and heating oil prices if carried to sufficient length. Up to this time, however, it has not aided gasoline, while the burning oils' performance marketwise has been dependent mainly on the weather. No. 3 fuel is still the strongest product in the list and remains scarce.

Lubricants

A steadily firming trend is noted in lubricants. Buying has been attracted to both neutrals and cylinder stocks by the persistence of the strengthening, which is causing rumors of possible sympathetic action in both lubricating oil crude and in retail motor oils.

Coke

Petroleum coke is steady but reveals no feature. Buying of this product in various grades is starting off the year on about the same basis as toward the end of last year. The tone remains quite firm and healthy.

Wax

Strength persists in wax, with possibility of further price advances foreseen here. Stocks are not increasing to any appreciable extent, whereas the buying continues in rather large volume.

Crude Oil Prices

(Continued from Page 25)

Rocky Mountain States

Iles, light (Sept. 29, 1933)	$.95
Iles, heavy (Sept. 29, 1933)	.80
Florence, Colo. (June 17, 1933)	.30
Fort Collins and Wellington, Colo. (June 17)	(See Salt Creek prices)
Big Muddy (Sept. 29, 1933)	1.01
Frannie, light (Sept. 29, 1933)	.87
Frannie, heavy (Sept. 29, 1933)	.62
Salt Creek and La Barge (Sept. 9, 1933)	
See Stanolind Mid-Continent price schedule	
Grass Creek, light (Sept. 29, 1933)	1.18
Grass Creek, heavy (Dec. 15, 1932)	.45
Elk Basin (Sept. 29, 1933)	1.18
Rock Creek (Sept. 29, 1933)	1.01
Dutton Creek (July 8, 1933)	
See Mid-Continent gravity prices	
Lance Creek (Dec. 16, 1932)	.93
Poison Spider (Mar. 5, 1931)	.70
Hudson (June 2, 1931)	.65
Lander (Mar. 5, 1931)	.40
Rex Lake (Feb. 22, 1930)	1.10
Osage (Jan. 18, 1933)	.52
Lost Soldier (Sept. 30, 1933)	.88
Hamilton Dome (Dec. 16, 1932)	.25
Torchlight (Sept. 29, 1933)	1.18
Greybull (Sept. 29, 1933)	1.18
Pondera	1.15
Sunburst (Sept. 29, 1933)	1.35
Cat Creek, Montana	1.07
Hogback (Sept. 29, 1933)	1.11
Lea County, N. Mex. (Sept. 29, 1933)	.75
Maljamar (Sept. 29, 1933)	.70
Artesia-Jackson (Dec. 1, 1933)*	.75

Note—Salt Creek, Torchlight, Elk Basin, Grass Creek, Frannie, Greybull, Hogback and Iles by Stanolind Oil & Gas Co. Elk Basin, Grass Creek light, Big Muddy, Rock Creek and Sunburst by Ohio Oil Co. Lost Soldier posted by Producers & Refiners Corp. Artesia, Jackson and Maljamar posted by Continental Oil Co. Lea County, effective September 29, by Humble Oil & Refining Co. and other buyers; Fort Collins, Wellington, Orchard, Florence, Big Muddy, Cat Creek, Rattlesnake and Table Mesa by Continental Oil Co. Osage posted by Arro.

*Continental Oil Co.

North Louisiana and Arkansas

Smackover, Ark. (all grades)	$.70
Urania, La. (Jan. 1, 1934)	.87
Nevada, Ark. (Sept. 29, 1933)	.60
East El Dorado (Sept. 29, 1933)	.70
Other fields	(See gravity table)

Note—Smackover: Effective September 29, 1933, Tex. Co., Magnolia Petroleum Co., Standard of Louisiana, Louisiana Oil Refining Corp., Gulf Refining Co. and Phillips Petroleum Co. East El Dorado posted by Magnolia Petroleum Co. and Gulf Refining Co., Nevada by Standard Oil Co. of Louisiana. Urania posted by H. L. Hunt, Inc., and Louisiana Oil Refining Co.

Eastern States

TIDE WATER PIPE CO.
(Effective October 4, 1933)

Bradford, Pa.	$2.45
Allegany, N. Y.	2.45

SOUTH PENN OIL CO.
(Effective October 4, 1933)

Pennsylvania Grade Oil in National Transit Lines (Bradford Field)	$2.45
Pennsylvania Grade Oil in Southwest Pennsylvania Lines	2.13
Pennsylvania Grade Oil in Eureka Pipe Line lines	2.07
Pennsylvania Grade Oil in Buckeye Pipe Line lines	1.93
Corning Grade Oil in Buckeye Pipe Line Co.'s lines (Oct. 3, 1933)	1.83

PENNZOIL CO.
(Effective October 4, 1933)

Pennsylvania Grade Oil in National Transit Lines:	
Group A (Includes Cochran, Franklin, Hamilton and Doolittle districts.)	$2.37
Group B (Includes Titusville district.)	2.36
Group C (Includes Turkey and Tidioute districts.)	2.35
Group D (Includes Bear Creek and Porkey districts.)	2.34
Group E (Includes Eldeneau, Bull Creek, Rough Run, Carbon, Dipner, Bredin, McJunkin, Jameson, Kennerdell, Emlenton, Tiona, Lacy and Kinzua districts.)	2.33
Price depends on length of pipe line haul to plant at Oil City.	

PURE OIL CO.
(Effective October 4, 1933)

Cabin Creek, W. Va.	$2.17
Bradford Hollow, W. Va.	2.17
Kelly Creek, W. Va.	2.17

Middle Western States

OHIO OIL CO.
(Effective September 29, 1933)

Lima	$1.30
Illinois (Jan. 5, 1934)	1.13
Princeton, Ind. (Jan. 5, 1934)	1.13
Plymouth	Shut in
Western Kentucky	1.18
Midland, Mich. (Sept. 30, 1933)*	1.02
Oceana, Mich. (Oct. 5, 1933)	.90
Somerset, Ky. (Sept. 30, 1933)	1.33
Hart County, Ky. (Oct. 1, 1933)	1.18

*Posted by Pure Oil Co. Producers Pipe Line Co. pays 5 cents per barrel over Pure Oil Co.'s posted price. Somerset, Ky., crude purchased by Ashland Refining Co., Ashland, Ky., and posted price includes premium. Hart County, Kentucky, crude purchased by Stoll Refining Co. Oceana posted by Old Dutch Refining Co. and Naph-Sol Refining Co

Canada

Ontario (September 9, 1933):	
Petrolia*	$2.10
Oil Springs*	2.17
Turner Valley (December 9, 1933):†	
Clear naphtha	$3.15
Discolored naphtha	2.91
Crude oil, 50 gravity	2.66
Crude oil, 45 to 49.9	2.07
Crude oil, 40 to 44.9	1.50

*Imperial Oil, Ltd. †Imperial Oil, Ltd., and Regal Oil & Refining Co.

Mexico

Panuco*	$.72

*F.o.b. ship, based on November transactions and exclusive of production and export taxes and bar dues.

California Crude Oil Prices

STANDARD OIL CO. OF CALIFORNIA
(Effective September 6, 1933)

For current purchases of crude oil at the well (unless otherwise specified). (All gravities above those quoted take highest price offered in that field.)

Gravity—	Long Beach	Seal Beach, Alamitos Heights	Huntington Beach	Inglewood	Playa del Rey	Olinda, Brea Canyon	Athens-Rosecrans	Torrance	Richfield	Whittier, La Habra	Montebello	Santa Fe Springs	La Habra-Coyote	Midway-Sunset, Elk Hills, Buena Vista Hills	Lost Hills	Coalinga	Coyote
14-14.9	$.65	$.65	$.65	$.65	$.65	0.65	....	$.65	$.65	$.65	$.65	....	$.65	0.57	$.57	$.57	$.65
15-15.9	.65	.65	.69	.69	.66	.69	....	.66	.65	.65	.65	....	.65	....	....	....	.65
16-16.9	.66	.65	.72	.73	.69	.72	....	.69	.67	.68	.65	....	.65	....	....	....	.65
17-17.9	.69	.65	.75	.76	.73	.76	....	.72	.70	.71	.65	....	.68	....	....	....	.68
18-18.9	.72	.65	.78	.80	.76	.79	....	.75	.74	.74	.65	....	.71	.61	.61	.59	.71
19-19.9	.75	.65	.81	.83	.80	.82	....	.78	.78	.78	.65	....	.74	.64	.65	.62	.74
20-20.9	.78	.68	.83	.87	.83	.85	....	.81	.82	.81	.66	....	.78	.67	.69	.65	.78
21-21.9	.81	.72	.86	.90	.87	.88	....	.83	.85	.84	.69	$.72	.81	.70	.73	.68	.81
22-22.9	.84	.76	.89	.94	.90	.92	....	.85	.89	.87	.72	.76	.84	.73	.76	.72	.84
23-23.9	.88	.81	.92	.97	.94	.95	$.83	.89	.93	.90	.76	.79	.87	.77	.79	.75	.87
24-24.9	.91	.85	.95	1.01	.97	.98	.86	.92	.97	.93	.80	.83	.90	.81	.82	.78	.90
25-25.9	.94	.89	.98	....	1.00	1.01	.90	.95	1.00	....	.85	.87	.93	.85	.85	.81	.93
26-26.9	.97	.93	1.01	....	1.04	1.04	.94	.98	1.04	....	.89	.90	.96	.89	.88	....	.96
27-27.9	1.00	.98	1.04	....	....	1.07	.97	....	1.08	....	....	.94	.99	.93	.91	....	.99
28-28.9	1.03	1.02	1.07	....	....	1.10	1.01	....	1.11	....	....	.98	1.02	.97	.94	....	1.02
29-29.9	1.06	1.05	1.09	....	....	....	1.04	....	1.15	....	....	1.01	1.05	1.01	.97	....	1.05
30-30.9	1.09	1.10	1.13	....	....	....	1.08	....	....	....	....	1.05	1.09	1.05	1.00	....	1.09
31-31.9	....	....	....	....	....	....	1.12	....	....	....	....	1.08	1.13	1.09	....	....	1.12
32-32.9	....	....	....	....	....	....	1.15	....	....	....	....	1.12	1.15	1.13	....	....	1.15
33-33.9	....	....	....	....	....	....	....	....	....	....	....	1.16	1.18	1.17	....	....	1.18
34-34.9	....	....	....	....	....	....	....	....	....	....	....	1.19	1.21	....	....	....	1.21
35-35.9	....	....	....	....	....	....	....	....	....	....	....	1.22	....	....	....	....	....
36-36.9	....	....	....	....	....	....	....	....	....	....	....	1.26	....	....	....	....	....
37-37.9	....	....	....	....	....	....	....	....	....	....	....	1.30	....	....	....	....	....
38-38.9	....	....	....	....	....	....	....	....	....	....	....	1.34	....	....	....	....	....

Additional Standard Oil Quotations

Elwood Terrace—F.o.b. ship, 33 degrees, $1.03; 34 degrees, $1.06 35-35.9, $1.09; 36-36.9, $1.12; 37 degrees and over, $1.15.
Newhall—14 degrees and over, 57 cents.
McKittrick and Kern River—14 degrees and over, 57 cents.
Wheeler Ridge—14 to 17.9 degrees, 57 cents; 18-18.9, 58 cents; 19-19.9, 61 cents; 20-20.9, 64 cents; 21-21.9, 67 cents; 22-22.9, 70 cents; 23-23.9, 73 cents; 24-24.9, 76 cents; 25 degrees and over, 79 cents.
Kettleman Hills—33-33.9 degrees, 93 cents; 34-34.9, 96 cents; 35-35.9, 99 cents; 36-36.9, $1.02; 37-37.9, $1.05; 38-38.9, $1.08; 39 degrees and over, $1.11.

The Texas Co. posted in Shiel Canyon, South Mountain and Santa Paula as follows: 14 to 17.9, 57 cents; 3 cents added for each degree up to and including 26-26.9 degrees at 84 cents; then 4 cents added for each degree up to and including 30 degrees and over at $1. Company posts Standard Oil Co.'s Montebello prices in Montebello and North Whittier, and posts Standard Oil Co. prices in Signal Hill, Alamitos Heights, Huntington Beach, Torrance, Richfield and Santa Fe Springs, all effective September 6.

General Petroleum Co. posts Standard Oil Co. prices in Athens, Rosecrans and Signal Hill; Alamitos Heights up to 26-26.9; Santa Fe Springs up to 35-35.9; Richfield up to 25-25.9; Brea Canyon and Olinda up to 25-25.9, and Torrance up to 25-25.9.

Union Oil Co., effective September 6, posts same prices as Standard Oil Co. in all fields in which both purchase, excepting that in Athens-Rosecrans, Union Oil Co. posts 21-21.9, 72 cents, and 33-33.9, $1.18; 34-34.9, $1.21, and 35-35.9, $1.24.

Associated Oil Co., effective September 6, posted same prices for the same grades as Standard Oil Co. of California, excepting that in some fields its gravity scale stops as follows: Huntington Beach, 36 degrees and over; Seal Beach and Alamitos Heights, 36 degrees and over; Coyote Hills, 33 degrees and over; Richfield, 35 degrees and over; Torrance, 35 degrees and over; Inglewood, 24 degrees and over; Santa Fe Springs, 35 degrees and over; Midway-Sunset, Elk Hills, Buena Vista Hills, 30 degrees and over. Also Associated pays 52 cents for oil of 11 to 13.9 gravity in McKittrick, Kern Front, Kern River, Midway-Sunset, Elk Hills, Buena Vista Hills, and Coalinga.

Lively Leasing Campaign on in Central Western Oklahoma Counties; Deep Production Cut

By JAMES McINTYRE

An active leasing play in Logan, Lincoln, Grady, Kingfisher and Garvin Counties has recently been made in which Sinclair Prairie Oil Co., Gypsy Oil Co., Anderson & Kerr Drilling Co., Standard Oil Co. of Kansas, Burk-Kan Petroleum Co., Phillips Petroleum Co., Mid-Continent Petroleum Corp., Magnolia Petroleum Co., Indian Territory Illuminating Oil Co., and others have taken part in one or more of the counties named. In Logan County, Township 18-4w, was the center of leasing operations, surrounding the location of Anderson & Kerr Drilling Co.'s Layton sand test, No. 1 Hull, NE NE SE Section 11, for which derrick is being erected.

The latest Lincoln County leasing campaign was in Townships 13-4, 15-3, 14-3, and 14-4. In Kingfisher County the area around Hennessey was favored by the purchasers, particularly in Townships 19-7w, and in 20-7w, over the line in Garfield County. Townships 15-6w and 18-5w are also being given a play.

In Garvin County, Townships 4n-1e, 4n-2w, and 4n-1w, have received the benefit of a leasing campaign in which the Phillips, Sinclair Prairie and Indian Territory companies took part. The Grady County play centered in Townships 6-7w, 7-6w, 4-8w, 9-5w, 3n-5w, and 3-6w.

Production Down

Oklahoma City production was cut to the bone in the last weekly production report. Only 96,710 bbls. per day was recorded. The Seminole-St. Louis area was cut down to an average of only 74,830 bbls. per day.

Indian Territory Illuminating Oil Co. has a big well in its No. 2, C NW NE NE Section 35-11-3w, Oklahoma City Field, which had Wilcox sand at 6,509-87 feet and flowed 627 bbls. in one hour. The gas volume was not estimated.

Shell Petroleum Corp.'s No. 1, C SW SW Section 21-20-2w, Lucien Pool, Noble County, found Wilcox sand at 5,078-5,103 feet and the hole filled with oil. It was shut in, and when opened flowed 215 bbls. in 35 minutes, and then quit. The crew reamed from 5,069 to 5,103 feet and attempted to take a core, but lost the core barrel and a fishing job followed.

Production by Pools

Estimated daily average production in Oklahoma in the week ending January 6 and in the preceding week was as follows:

Field or pool—	Jan. 6	Dec. 30
Allen	8,395	7,925
Bristow-Slick	10,500	10,500
Cushing-Shamrock	12,590	12,500
Healdton	9,600	9,500
Hewitt	5,000	5,000
Burbank	9,300	9,250
Balance of Osage	21,000	20,350
Lucien	3,525	4,500
Bowlegs	7,175	8,949
Carr City	4,225	4,885
Earlsboro	7,465	8,535
East Earlsboro	9,660	11,605
South Earlsboro	1,050	1,295
Little River	10,055	12,485
East Little River	530	785
Seminole	9,130	8,825
East Seminole	955	1,245
Searight	1,640	2,310
Maud	1,415	1,440
Mission	3,210	3,870
St. Louis-Pearson	18,270	14,140
Cromwell	4,750	4,700
Oklahoma City	96,710	111,610
Tatums-Tussey	7,590	7,500
Sholem-Alechem	4,900	4,900
Duncan district	5,000	5,000
Tonkawa-Garner-Thomas	6,750	6,500
Holdenville-Fish	3,475	6,960
Wewoka	4,500	4,470
Other fields	85,300	83,995
Total	377,760	395,450

Logan County

Mid-Continent Petroleum Corp.'s No. 1 Campbell, C SE NE Section 33-17-4w, Crescent Pool, Logan County, flowed 660 bbls. per day by heads in the past week. It is in first Wilcox sand at 6,045-80 feet.

Amerada Petroleum Corp. has rig up and rotary moved in to start No. 1 Denny, C SE SE Section 33-17-4w, and likewise Eason Oil Co. on No. 2 Katscher, C NW SW Section 34-17-4w. The Gypsy Oil Co. and Carter Oil Co.'s No. 1 Knowles C NW NW Section 34-17-4w, will be tested in Layton sand at 4,885-4,925 feet and tanks were being built.

Lincoln County

In the West Chandler Field in Lincoln County Twin State Oil Co. was moving in rig to start No. 1 Cook, SW cor. Section 1-14-3.

Slick Estate and others' No. 5 fee, NW NE SW Section 7-14-4, had Wilcox sand at 5,065-5,115 feet and swabbed 90 bbls. of oil and 40 bbls. of water. It will be plugged back.

Magnolia Petroleum Co.'s No. 1 Green, NE cor. Section 18-14-4, got Wilcox sand at 4,990 feet and at 4 feet in it flowed 910 bbls. in five and one-half hours. It was then shut in for tankage. The well made 217 bbls. the first hour and was partly pinched in during a part of the four-hour flowing period.

Oklahoma City

In the Oklahoma City Field Helmerich & Payne's No. 1 Oklahoma City, 880 feet from south line and 60 feet from the east line, SW Section 34-12-3w, flowed 1,738 bbls. in six and one-half hours from sand at 6,332-6,485 feet. It showed gas at the rate of 14,000,000 feet per day.

Wofford Drilling Co. and Skelly Oil Co.'s No. 3 Military addition, 850 feet south and 150 feet west of C Section 34-12-3w, flowed 2,178 bbls. in six hours from Wilcox sand at 6,376-6,519 feet. The same companies have three other wells drilling on the same lease of which one, No. 2, was drilling at 6,357 feet and another was cleaning out in Wilcox sand at 6,348-6,478 feet.

Blackwell Oil & Gas Co. plugged back in No. 1 Sullivan, CEL SW NW SW Section 2-11-3w, from 6,491 feet to 4,891 feet and shot Layton sand at 4,828-91 feet with 60 quarts. The well made 43,-000,000 feet of gas and was completed.

Indian Territory Illuminating Oil Co. completed No. 2 Wisel, 990 feet from south line and 1,120 feet from west line, SE Section 26-11-3w. It flowed 884 bbls. in four hours with gas at the rate of 72,000,000 feet.

Phillips Petroleum Co. and Shell Petroleum Corp.'s No. 5 Berg, CEL SW NE SW Section 26-11-3w, flowed 383 bbls. in four hours, with gas at the rate of 8,000,000 feet. It has completed No. 6 Berg, CEL SE NW SW Section 26, which flowed 278 bbls. in 30 minutes with a 20,000,000-foot flow of gas from Wilcox sand at 6,568-6,647 feet.

Stahl and others' No. 1 Odelbache, 75 feet from north line and 510 feet from the west line, NE Section 27-11-3w, flowed 347 bbls. in four hours and was shut in.

Greater Seminole

Stanolind Oil & Gas Co. completed No. 1 Jones, NW SE NW Section 20-9-6. It pumped 95 bbls. of oil and 84 bbls. of water in 24 hours from Calvin sand pay at 2,766-68 feet. Magnolia Petroleum Co. completed No. 2 Franks, SW cor. Section 25-9-6, a 45-bbl. well in Hunton lime, 3,929-75 feet. Both the above wells were old Wilcox sand producers plugged back.

Atlantic Oil Producing Co. completed No. 1 Davis, SW NE SE Section 13-8-6. It pumped 143 bbls. in a 48-hour test, producing from Wilcox sand at 4,142-55 feet.

Hilton Phillips' No. 1 Cherry, NE cor. SW Section 21-7-4 flowed 115 bbls. a day from Hunton lime topped at 3,590 feet, total depth 3,958 feet. It was then acidized.

Sinclair Prairie Oil Co.'s No. 3 Meyers, NE SE SE Section 32-7-4, topped Simpson sand at 4,101 feet and drilled to 4,195 feet. It was plugged back to 4,193 feet to shut off salt water and swabbed 155 bbls. in 11 hours. It was then treated with acid.

Mid-Continent Petroleum Corp.'s No. 1 Kohdot, SW SE SE Section 36-7-4,

(Continued on Page 49)

Wildcat Operations in Oklahoma

Week Ending January 6

Northern Oklahoma

ALFALFA COUNTY

Company, farm and location— Remarks:
Acre et al's No. 1 Acre, C SW NE Sec. 14-24-11w.....T.D. 6,255 ft.; C.O.

BECKHAM COUNTY

West Oak Gas Co. et al's No. 1 Powell, NW SW Sec. 11-9-25w .....T.D. 2,183 ft.

CADDO COUNTY

Denver Prod. & Ref. Co.'s No. 1 Noe, NW SW SW Sec. 34-10-10w .....T.D. 9,540 ft.; moving in tools.

GARFIELD COUNTY

J. H. Lewis' No. Clark, C NW NW Sec. 34-21-6w.....T.D. 6,397 ft.; S.D.

HUGHES COUNTY

Birk-Kan.'s No. 1 Gardner, NE NW Sec. 32-6-9 .....Spudded and S.D.
Scruggs et al's No. 1 Black, NE Sec. 13-9-10 .....T.D. 2,660 ft.; U.R. 8-in. csg.

KAY COUNTY

Burton Lewright et al's No. 1 Leseman, SW NE SE Sec. 4-28-2 .....Rig.

KIOWA COUNTY

Christian's No. 1 James, NE NW Sec. 8-7-18w.....T.D. 1,904 ft.; repairing rig.
Erickson et al's No. 1 Heatherton, NW SW Sec. 14-6-16w.S.D. 375 ft.

LINCOLN COUNTY

Amerada Pet. and Stanolind O. & G. Co.'s No. 1 Martinek, NW SE Sec. 25-13-5e .....P.B. to 3,915 ft.; to drill new hole.
Huckleberry et al's No. 1 Boland, SW cor. Sec. 25-12-3e..Drlg. 4,979 ft.

LOGAN COUNTY

Amerada and Stanolind's No. 1 Fouts, NW NE Sec. 14-17-1w .....Rigging up.
Barnsdall Oil Co. et al's No. 1 Seyller, NE SE Sec. 12-15-4w .....Drlg. 3,890 ft.
Jadeka Dev. Co.'s No. 1 Frakes, C SW NE SW Sec. 16-15-4w .....T.D. 2,245 ft.; fishing.

MUSKOGEE COUNTY

J. S. Routt et al's No. 1 Escoe, CWL SE NE Sec. 17-13-17. T.D. 1,200 ft.; S.D. for 10-in. csg.

OKLAHOMA COUNTY

Springrose Drlg. Co.'s No. 1 Edwards, C SE SE Sec. 19-11-1 .....Drlg. by tools; T.D. 5,971 ft.

PAYNE COUNTY

L. G. Hulse's No. 1 Sloan, SW NW SE Sec. 19-17-3.....Sand 1,226-41 ft.; drlg. 1,350 ft.
Mid-Continent Pet. Corp.'s No. 1 Swank, SE NE NE Sec. 19-19-2 .....T.D. 4,552 ft.; R.U. standard tools.

PITTSBURG COUNTY

Moffett & Hall's No. 1 Jones, C NE NW Sec. 14-8-14....Lost tools; T.D. 3,200 ft.; S.D.
Stencil Oil Co.'s No. 1 Chunn, SE NW Sec. 29-4-14.....Building rig.

PONTOTOC COUNTY

Galbreath's No. 1 Stafford, NE SE SE Sec. 31-2-6.....T.D. 1,380 ft.; S.D.
W. E. McGraw's No. 1 Mayhue, NE Sec. 19-2-6.....Drlg. 1,850 ft.
Stanolind-Amerada's No. 1 Aldridge, C N½ S½ SE Sec. 3-5-7 .....Coring 4,250 ft.
Delaney et al's No. 1 Dawes-Hardin, SE NW Sec. 30-2-7. Drlg. 300 ft.
Williams' No. 1 Kroth, NE SE Sec. 33-3-4.....H.F.W. 1,977 ft.

POTTAWATOMIE COUNTY

Atlantic Oil Prod. Co.'s No. 1 School land, C NE NW NW Sec. 36-10-4 .....P.B. to 4,240 ft.; drlg. 4,249 ft.
Payne Drlg. Co.'s No. 1 Lovelace, NW SW NW Sec. 27-6-4. T.D. 3,780 ft.; csg. collapsed.
Texas Co.'s No. 1 Terfertiller, NW NE Sec. 4-8-3 .....Drlg. 4,088 ft.

SEMINOLE COUNTY

John Burns' No. 1-B Shepard, SE NE Sec. 4-8-3 (O. W.D.D.) .....T.D. 1,658 ft.; S.D.
Amerada Pet. Corp.'s No. 1 Parsons, 330 ft. N of S line of Lot 7, Sec. 12-11-4 .....Drlg. 3,767 ft.
Flemiee et al's No. 1 Bowlega, SE NE SW Sec. 1-7-7..Drlg. 1,260 ft.

WASHITA COUNTY

McWhirter & Bost's No. 1 Hall, SW SE SE Sec. 28-8-19w. T.D. 2,155 ft.; lost sand pump.

Southern Oklahoma

ATOKA COUNTY

J. D. Boukan's No. 1 Howard, NW SW NW Sec. 20-2s-10e. Drlg. 1,105 ft.
Brookshire et al's No. 1 Rowland, NW NE NE Sec. 18-3s-10e .....Drlg. 3,443 ft.

CARTER COUNTY

Kilgore et al's No. 1 Williams, SE NW SW Sec. 20-1s-2w. Rigging up.

COMANCHE COUNTY

Stores et al's No. 1 Crutcher, C NE Sec. 11-1n-12w....Set 10-in. pipe 18 ft.

DEWEY COUNTY

Continental Oil Co.'s No. 1 Bessemer, C SW NE Sec. 8-19-20w (4,000-ft. test) .....Drlg. 1,950 ft.

GARVIN COUNTY

National Prod. Co.'s No. 1 Littrell, NE cor. Sec. 31-2n-3w. S.D. 299 ft.

JACKSON COUNTY

Gypsy Oil Co.'s No. 1 Kelly, NE Sec. 10-1n-20w.....Drlg. 2,084 ft.

MURRAY COUNTY

A. E. Harden's No. 1 Sadler, NE Sec. 19-1-2 .....Rig.
T. E. Revelle et al's No. 1 Wolfe, NE cor. Sec. 18-1-2....Running 8-in. pipe; T.D. 1,500 ft.
F. E. Revelle's No. 1 Wolfe, NE cor. Sec. 18-1n-2e.....T.D. 2,090 ft.; csg. frozen at 2,060 ft.

PUSHMATAHA COUNTY

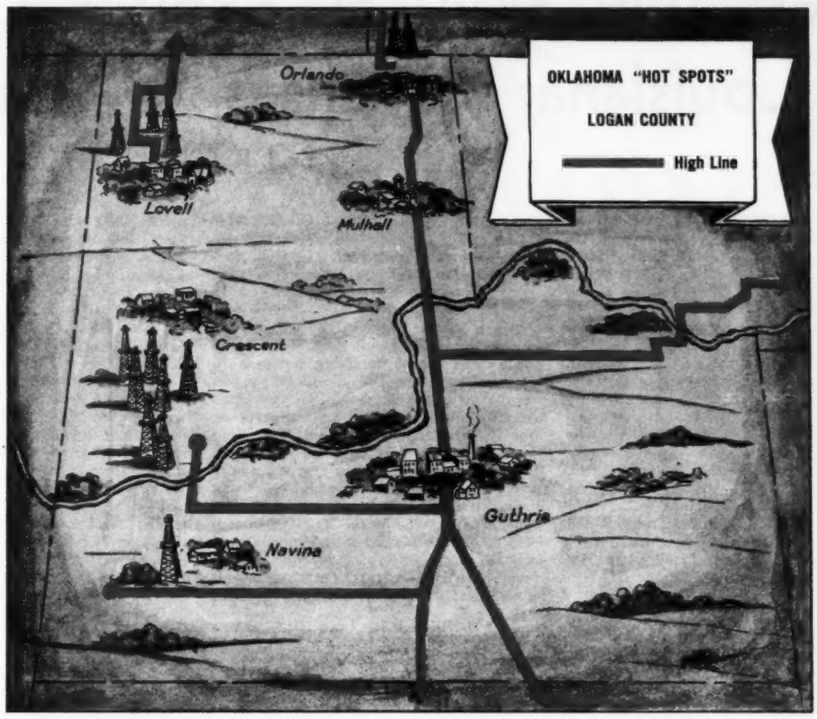
J. V. Scrivener et al's No. 1 Swink, C NE SE Sec. 29-6s-20e .....S.D. 410 ft.
Whitehead et al's No. 1 Messer, SE SW SW Sec. 35-3s-18e. T.D. 2,405 ft.; S.D.

STEPHENS COUNTY

J. W. Madison's No. 1 Tussey, SW SE NW Sec. 24-1n-4w Drlg. 2,975 ft.
Gillette Bros.' No. 1-A Cooley, NW SE NW Sec. 17-2s-3w. Dry and abd. 2,500 ft.
Lloyd Oil Co.'s No. 1 McKimmons, SW cor. Sec. 15-1n-4w .....T.D. 3,549 ft.
MacMo Oil Co.'s No. 1 Butler, SW NW SE Sec. 36-2s-7w Rigging up.
R. G. Poland et al's No. 1 Green, C NE NW NW Sec. 8-1s-4w .....Dry and abnd. 3,506 ft.

TILLMAN COUNTY

J. H. Everett's No. 1 Crane, SW cor. Sec. 15-3s-14w....Rig.



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OKLAHOMA GAS AND ELECTRIC COMPANY

Commercial Department

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Interesting Wildcats Feature News From North Louisiana; Arkansas' 6 Near Completions

By J. R. CRUMPTON
Staff Correspondent, Louisiana-Arkansas

SHREVEPORT, La., Jan. 9.—Considerable interest continues to be attached to J. P. Evans' third test, No. 1 Crichton estate, which is being drilled in the center of a geophysical high in Section 34-18-9, Webster Parish. Two other tests drilled in the vicinity recently by the same operator had barren results, but revealed important subsurface information which coincided with the magnetometeric surveys and helped materially in making the location for the present test.

The Dubberly High

The structure, known as the "Dubberly High," is located about 3 miles south and slightly east of the town of Sibley. The presence of this geologic anomaly was first suspected from subsurface information obtained from wells drilled in the general area, although there was insufficient control to define the limits of the structure, the amount of uplift, or whether there was any closure to the west, in the direction of the Bistineau salt dome.

William M. Barrett, Inc., carried out a reconnaissance magnetometric survey to determine the structure of the top of the Nacatoch group, and while technical difficulties were encountered in attempting to work this horizon, which in this general area is difficult for geological or geophysical mapping, nevertheless the investigation indicated a well defined structural high, with between 25 and 50 feet of west closure.

J. P. Evans' No. 1 Burson, Section 27-18-9, confirmed the presence of the structure when it topped the Nacatoch group at a subsea depth of 1,248 feet, some 60 feet higher than the geophysical survey predicted. It was then decided to recompute the geophysical data, using the base of the Annona chalk for a reference plane. However, before this analysis was completed, No. 1 Miller, Section 29-18-9, 1½ miles west of the Burson well, had commenced drilling. The recomputed geophysical work was completed before the No. 1 Miller reached a depth of 300 feet and indicated that this test would check 89 feet lower on the base of the Annona chalk than No. 1 Burson. The log of the completed well revealed that it actually checked 75 feet lower, which corroborated the revised geophysical predictions, and confirmed the presence of adequate west closure.

The geophysical contours on the base of the Annona chalk show that the Burson test, which logged showings of oil and gas both in the Blossom and Woodbine horizons, was located some 50 feet down dip on the north flank of a rather pronounced structure, which is situated about midway between the Bistineau and Vacherie salt domes. Should the present test check as much as 50 feet higher than the No. 1 Burson, about 1 mile to the north, it should make some kind of a producer from the Blossom sand.

Other Important Wildcats

There are several other wildcats, recently started in the North Louisiana district that will be closely watched. In the southern part of Natchitoches Parish, George R. Stevens and others have spudded in on their No. 1 Clarke-Boyce Lumber Co., Section 10-5n-6w, and set 10-inch surface casing at 210 feet. Surface data on this test shows a distinct terraced nose with a maximum of 15 feet of closure, which is based on outcropping of the Catahoula beds. Subsurface shows a nose, but control is inadequate. The most promising horizons in this vicinity are the Cockfield sands, Conroe pay, which should be contacted around 1,500 feet, the upper Sparta at approximately 2,400 feet, and the lower Cane River, Urania pay, at 3,200 feet. Three old wells, drilled in a group at approximately the center of Section 23, showed a small volume of dry gas in the upper Sparta. One of the wells was deepened to the Urania sand, and encountered two oil saturated sands, but due to mechanical troubles with the well, these oil sands did not have an adequate test.

Drilling With Core Rig

The Gulf Refining Co.'s No. 1 Luther Ford, a core test on a geophysical high in Section 8-22-13, 7 miles west of Plain Dealing in Bossier Parish, is making good progress, having set 12½-inch casing at 317 feet and drilling ahead at 2,470 feet. The test is being drilled with a large gasoline core rig capable of making 5,000 feet of hole. In the same parish, Jenson and others' No. 1 Ledbetter, Section 6-18-11, cored a likely looking sand at 2,143 feet and arrangements are being made to set 6-inch surface casing at 2,120 feet. The Haynesville Partnership's No. 1 Anna Taylor, Section 11-23-8, on the flank of the Haynesville Field in Claiborne Parish, developed disappointing results on test of 11 feet of Oolitic lime in the Glen Rose of the upper Trinity series. A drill stem test from 4,300 to 4,312 feet developed 9 fourbles of salt water in 15 minutes, and another test from 4,378-90 feet was dry. It is understood at this writing though, that further tests have been made after deepening with a good show of oil from a Trinity sand. An effort will be made to case off the salt water from above and a thorough test made of the oil show. An abandoned deep wildcat test near Lisbon, northeast of the Sugar Creek Field, Claiborne Parish, is reported making oil from around the casing. The well, the United Gas Public Service Co.'s No. 1 Meadows, Section 13-21-5, was drilled to a total depth of 6,710 feet, making many unsuccessful tests from the contact of the upper Trinity to the total depth. The owners of the well do not attach any particular significance to the oil seepage, stating that it is probably a pocket of dead oil coming from one of the salt water horizons. Considerable oil was used in lubricating stuck drill stem shortly before the well was abandoned. Only one other wildcat tested anything out of the ordinary during the past week in North Louisiana. Baily Gantz' No. 1 Jenkins, Section 35-13-12, DeSoto Parish, on drill stem test developed an estimated flow of 5,000,000 feet of heavily saturated gas from a total depth of 3,586 feet. The operators report the pay coming from 14 feet of sand, and 6-inch casing will be set for further testing.

Only Four Completions

For the first time in many weeks the Converse Field in Sabine Parish failed to furnish a producer. Only four completions were reported from the North Louisiana area, consisting of two gas wells, one oil well and one dry hole. The Many area on the eastern flank of the Zwolle Field reported the only commercial producer. The Pelican Natural Gas Co.'s No. 27 Louisiana Long Leaf Lumber Co., Section 29-8-11, is flowing 500 bbls. daily from 2,418 feet. In the Blanchard area of Caddo Parish, the Louana Oil & Gas Co.'s No. 2 Hammock, Section 32-19-16, came in with an estimated flow of 12,000,000 feet of gas from 2,757 feet. In Ouachita Parish of the Monroe Field, Hope Production Co.'s No. 3 Cole heirs, Section 36-20-3e, gauged 3,000,000 feet of dry gas with 760 pounds rock pressure from 2,141 feet. To offset the small number of completions, renewed activity in the district was reflected by 14 new operations, some of them wildcats, but most of them in the Converse area of Sabine Parish.

Daily Average Runs

The daily average runs from the several pools were:

NORTH LOUISIANA

	Bbls.
Caddo light	4,500
Caddo heavy	1,380
Converse	1,050
Cotton Valley	535
DeSoto and Red River	1,535
Elm Grove	330
Haynesville	3,450
Holly	190
Homer	2,500
Pleasant Hills	210
Sarepta-Cartersville	795
Urania	3,070
Zwolle	6,665
Total North Louisiana	26,210
Total previous week	26,195
Increase	15

ARKANSAS

Champagnolle	1,280
El Dorado	2,485
Lisbon	410
Miller County	825
Nevada	555
Smackover light	2,550
Smackover heavy	21,095
Stephens	630
Urbana	2,350
Total Arkansas	32,180
Total previous week	32,290
Decrease	110
Total both states	58,390
Total previous week	58,485
Increase	95

ARKANSAS

Six wells in the Miller County Field are nearing the pay sand and one is standing full of oil waiting for a standard rig to pump. Arkanva Oil Corp.'s No. 1 Smith, Section 33-15-26, has set 7-inch casing at 2,920 feet and encountered 2 feet of cap and 4 feet of sand with the total depth at 2,926 feet. Black Diamond Oil Co.'s No. 1 Miller Land & Lumber Co., Section 29-18-27, is drilling in rock at 2,820 feet. The Texarkana Oil Corp.'s No. 2 E. L. Beck, Section 33-15-26, has set 7-inch casing at 2,928 feet with 3 feet of sand penetrated to 2,931 feet. Lee Timberlake's No. 1 B. F. Smith, Section 33-15-26, is driling at 2,600 feet

Wildcat Operations in Louisiana-Arkansas

(Rotary operations unless otherwise designated)

North Louisiana

AVOYELLES PARISH

Company, well, farm name, section and block— Remarks:
Haas & Stoker's No. 1 Lindstrum Land Co., 690 ft. S, 980 ft. E, NW cor. Sec. 34-1n-6e ..... Set 12-in. 40 ft.

BIENVILLE PARISH

Poole & Johnson's No. 1 H. E. Suddith, 1,170 ft. E and S, C Sec. 28-14-16 ..... Derrick.

BOSSIER PARISH

C. E. Reid, tr.'s No. 1 Dotys, 730 ft. S, 618 ft. W, NE SE Sec. 7-16-11 ..... Coring 2,828 ft.

CADDO PARISH

W. O. Bliss' No. 1 McDade, 330 ft. N and E, SW cor. NW NW Sec. 2-20-15 ..... Rigging up.

CALDWELL PARISH

Hartley et al's No. 1 Taylor, most southeasterly cor. Sec. 42-14-4e ..... Derrick.
Terrell & Price's No. 1 La. Central Lbr. Co., 300 ft. N, 200 ft. W, SE cor. NW NE Sec. 12-11-3e ..... S.D. 1,960 ft.

CATAHOULA PARISH

T. R. Hincey's No. 1 Millsaps, Sec. 22-9-6e ..... Derrick pattern.

CLAIBORNE PARISH

Haynesville Partnership's No. 1 Anna Taylor, 330 ft. N and E, SW cor. SE SW Sec. 11-23-8 ..... Drlg. 4,390 ft.

DE SOTO PARISH

Coker Oil Corp.'s No. 1 Huson, 200 ft. S, 500 ft. W, NE cor. NW Sec. 8-12-14 ..... Drlg. 125 ft.
Geo. M. LeGrand's No. 1 Faris, 330 ft. S and W, NE cor. SE Sec. 19-11-15 ..... Tested dry, W.O. 2,360 ft.
A. F. Tarver's No. 1 Barnhart, 330 ft. N and W, SE cor. NE Sec. 16-15-13 ..... Drlg. 2,905 ft.

GRANT PARISH

L. L. Lindsey et al's No. 1 Edenborn, 250 ft. E, 150 ft. N, SW cor. SE SE Sec. 13-7-4 ..... S.D. 925 ft.

NATCHITOCHES PARISH

Geo. R. Stevens' No. 1 Clarke-Boyce Lbr. Co., 330 ft. N and W, SE cor. Sec. 10-5n-6w ..... Set 10-in. 210 ft.

SABINE PARISH

Frank R. Foster, Inc.'s No. 1 D. E. Stephens, 330 ft. S and E, NW cor. SE NW Sec. 17-9-11 ..... Cmtd. back to 2,838 ft.

CONVERSE DISTRICT

Arrock Oil Co.'s No. 1 Hewitt, 330 ft. N and E, SW cor. NE SE Sec. 20-9-13 ..... Treating with acid 1,606 ft.
J. F. Anderson's No. 1 Burkett, 135 ft. N, 655 ft. E, SW cor. NW Sec. 10-9-13 ..... W.O.S.R. 1,921 ft.
Nick Barbare's No. 1 Bolton, Sec. 9-9-13 ..... Set 10-in. 40 ft.; drlg. 1,300 ft.
Nick Barbare's No. 1 Burkett, 500 ft. N, 900 ft. E, SW cor. NW Sec. 10-9-13 ..... T.A. 1,672 ft.
J. W. Bettis et al's No. 1 Frost Lbr. Ind., 330 ft. S and W, NE cor. SW Sec. 15-9-13 ..... Rigging up.
A. G. Craig's No. 1 Belton, 330 ft. N and E, SW cor. NW NW Sec. 22-9-13 ..... S.D. 935 ft.
Florence Oil Co.'s No. 2 Crawford, Sec. 20-9-13 ..... Set 10-in. 42 ft.
J. E. Freeman's No. 1 Barr, 990 ft. N and E, SW cor. NW Sec. 15-9-13 ..... W.O.S.R. 1,984 ft.
Alfred Glassell's No. 1 Tatum, 330 ft. N and W, SE cor. NE NW Sec. 9-9-13 ..... Drlg. 1,700 ft.
Gerhig Oil Co.'s No. 1 Burkett, 330 ft. S and W, NE cor. SE SE Sec. 9-9-13 ..... Set 4½-in. 1,777 ft.
Helena O. & G. Co.'s No. 1 E. L. Graham, 330 ft. N and W, SE cor. NE NW Sec. 20-9-13 ..... Drlg. 1,490 ft.

(Continued on Page 74)

and Frank W. Rowe's No. 1 Dominick, Section 21-15-26, is shut down for rig repair at 2,830 feet.

In Conway County, Southern Union Gas Co.'s No. 1 Feldman, Section 6-6-17, is drilling in sandy shale at 2,500 feet. A new operation in Lafayette County, Douglas Lawn's No. 1 Camp, Section 14-15-23, has set 10-inch surface casing at 52 feet. E. R. Henderson's No. 1 Vines, Section 29-18-14, Union County, topped the Nacatoch at 2,161 feet and cored 3 feet of likely looking sand to 2,164 feet. In the Urbana area, the Marine Oil Co.'s No. 2-D Thompson, Section 3-18-13, is drilling in red beds at 3,384 feet.

Refiners Should Co-operate With Designers of Diesels

(Continued from Page 13)

As the fuel pump plungers and injection valves wear this leakage increases with the result that with thin fuel we reach a point sooner in the life of the engine where we are troubled by small maintenance adjustments on the fuel injection equipment. If such adjustments are not made or the necessity would not be noticed, trouble occurs in the combustion of the fuel and we get a smoky exhaust and a marked tendency for gumming up the piston rings. Again, a thin low viscosity does not provide adequate lubrication for the fuel pump and injection valve equipment. Thus, the rate of wear tends to be more rapid and the tendency to produce leakage troubles is increased.

On the other hand for automotive and tractor use a thick fuel is apt to give trouble in the cooler months due to the very much increased viscosity, and in some cases, the pourpoint of the fuel is above that of the atmospheric temperature so that fuel will not flow to the suction side of the fuel delivery pump. Such is not the case in power plant installations where it is usually possible to provide simple means for heating the fuel tank but this is a serious consideration in the case of automotive and tractor equipment where a suitable means of heating cannot be provided. Another feature of a heavy fuel is that in order to obtain high viscosity it is necessary in a large number of cases to include heavy residual fuels in the blend which leads us on to the next consideration of boiling range.

Boiling Range

At the beginning of this paper it was noted in the third stage of combustion, the combustion takes place as the fuel is injected into the cylinder. This is substantially true for all the regular cases of gas oil and lighter residual oils. However, if we are to consider appreciable contents of heavy residue then this does not hold true and a very considerable amount of late burning occurs during the expansion stroke. If this burning is not complete before the exhaust valve opens we shall get a very dirty exhaust and what is worse, a considerable amount of half burned products which will deposit on the cylinder walls and will eventually cause sticking of the piston rings.

Another undesirable feature of these half burned products is that they tend to condense on the cylinder walls and form corrosive acids. This corrosion is continually going on, and, with the piston scraping the corrosion products away after each stroke, makes for very high cylinder wear. One of the chief troubles that was encountered in the earlier development of high speed Diesel engines for automotive use was the high degree of cylinder wear. This difficulty was eventually traced to poor combustion and the corrosion theory which has just been mentioned was considered to be the cause of the cylinder liner wear. The fuel should not be blamed for this high cylinder wear. Broadly speaking, the fuel can be considered to cause wear only in so far as it causes poor combustion. In some fuels with very high boiling range the wear is slightly greater due to the fact that these heavy fractions are not completely burned by the time they reach the relatively cool cylinder walls. In this connection we must emphasize that we are speaking here particularly of the high speed class of engine. In the low speed and medium speed class of engine this has been also found to be true though to a far less marked degree, and such engines can burn larger quantities of heavy residual fuels without ill effect. The Conradson carbon test is sometimes useful because it affords a measure of the residual content of the fuel.

In the Conradson carbon test, however, the oil is burning with insufficiency of oxygen while in the Diesel engine the oil is burning in the presence of considerable excess oxygen. Fundamentally therefore, it is wrong as an exact test since the conditions of combustion are widely different.

Other Factors

A specification often included by engine manufacturers is the percentage of total sulphur. It is claimed that the presence of sulphur will cause corrosion troubles in the engine and exhaust system. While this may be true, theoretically, in practice this is unimportant. Sulphur will only cause corrosion in exhaust pipes if the silencer is so situated that the products of combustion are condensed in the exhaust lines. In such cases corrosion may occur but is very quickly cured by suitable lagging of the exhaust system.

Another test often specified is the percentage of ash. Within reason this is also unimportant. For all oils suitable for medium and high speed Diesel engines the ash content is negligible because such fuels will usually be overhead distillates. Specific gravity is another test which is used to classify the various grades of oil but is of little practical importance.

Asphalt content is another rather meaningless test principally because of the lack of suitable means of measurement and the fact that what is often given as asphalt is perfectly suitable and is completely burned under the conditions of operation.

Last but by no means least a prolific source of trouble with Diesel engines is caused by the use of dirty fuel. Fuel should not only be supplied free from various impurities like sulphur and ash but should be kept free of solid impurities after its delivery by the supplier. It is true that in a few cases oil gets contaminated on its way from the refinery to the final point of distribution, but by far the greatest source of trouble is careless handling in the field. This applies particularly to appplications such as tractor and automotive use, and it is in these particular cases where cleanliness is of vital importance. It must be remembered in this connection that Diesel fuel being considerably heavier and more viscous than gasoline will hold dirt in suspension for a longer period of time. Great care must, therefore, be taken in the filling of the fuel tanks that the funnel and hoses used to fill such tanks are clean.

Conclusion

The need for close co-operation between the Diesel engine manufacturer and the fuel supplier is worth emphasizing. Such co-operation is more necessary than in the case of gasoline engines since not only has the engine manufacturer a greater variety of fuels to deal with but unlike the gasoline engine, the Diesel engine does not benefit from the use of special fuels and is even penalized to a greater extent by the high cost of such special fuels.

The authors would, therefore, like to make a plea for close co-operation between the two industries such as is now in effect through the Co-operative Fuel Research Committee between the automotive and petroleum industries on gasoline engines. There are committees in existence through which this co-operation can be effected and adequate support of the work of these committees will be conducive to far greater advancement in the development of Diesel engines than the present attitude of designing an engine which will normally burn anything, "and passing the buck" to the fuel supplier.

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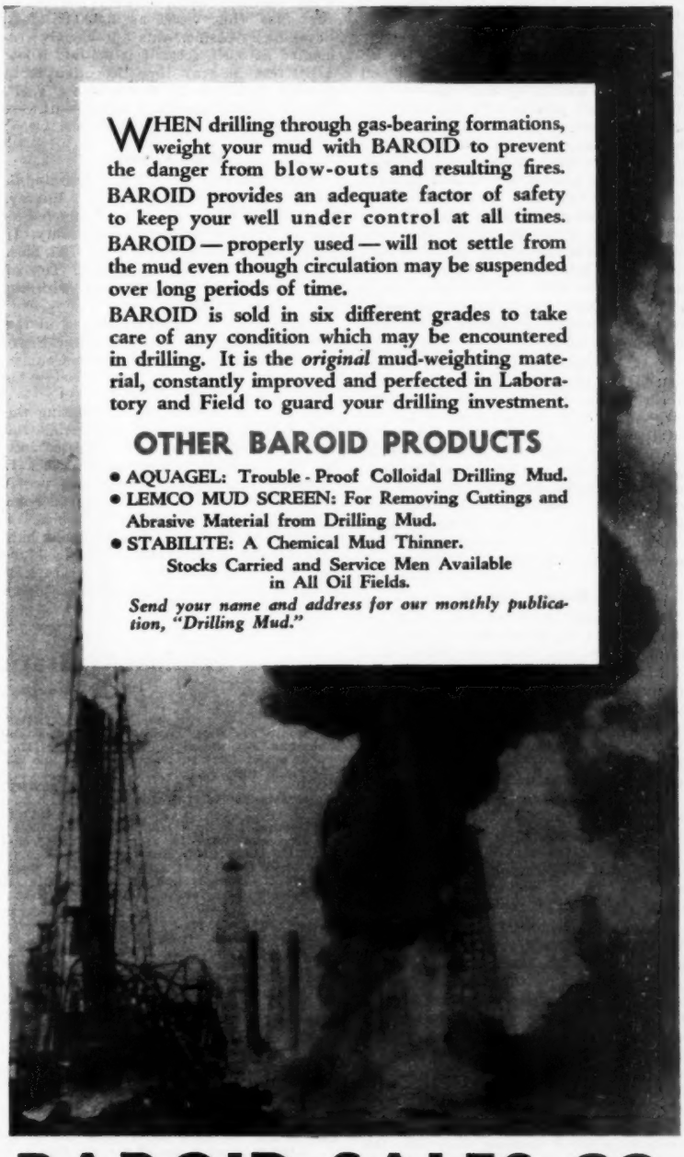

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Best Producer Yet Completed in McMillan Pool; West Texas Has 15 Completions, 10 Locations

By L. E. BREDBERG
Fort Worth Bureau, The Oil and Gas Journal

FORT WORTH, Tex., Jan. 8.—The Railroad Commission hearing on the Church-Fields and McElroy Pools, Crane County, here today drew a great number of interested parties, two factions arguing as to the manner in which the two areas should be prorated. Gulf Production Co. and McElroy interests made up one faction and Weekley Oil Corp., C. C. Duffey and the Texas Co. composed the other.

Testimony offered showed that the allowable per well in the old Church and Fields area was 20½ bbls. against 132 bbls. for each producer in the McElroy area. However, Gulf Production Co. offered testimony that its wells are producing in the most efficient manner with gas oil ratio now 470 to 1 and brought out that if this area was curtailed to meet the lower per well allowable the gas oil ratio would be raised. The company also maintained that the north end, or Church and Fields area, had been densely drilled while the McElroy district inside had been conservatively developed with only about 27 producers or one well to each 300 acres.

C. B. Williams, of the Texas Co., suggested that the Church and Fields and McElroy areas be combined for proration purposes. There are two sides to the question. If such a combination was made figures were produced to show this would lower the Gulf's outlet about 300 bbls. daily. Both sides admitted that the entire area is a common pool, except, as Gulf Production stated, from a legal standpoint. The commission will announce its decision later.

Runnels County

A. G. Agnew & Sons' No. 1 Fowler, in Section 23, N. Travis Survey No. 533, Runnels County, was completed this week for the best producer in the McMillan Pool in which 45 degree gravity oil is produced. The well is a 660-foot southwest extension and came in as a 672-bbl. well at a total depth of 2,537 feet after drilling 1 foot of pay. It filled up and made its first flow in 30 minutes.

Mann and others' No. 1 Wade, in Block 10, same survey, Runnels County, came in last week extending production 1,320 feet to the northwest. It topped the pay at 2,537 feet and was shut down only 2 feet in the sand and was reported good for around 175 bbls. per day.

Golden Petroleum Co.'s No. 2 McMillan, in Lot 22, N. Travis Survey, in the same pool, is the next test due to make a producer, the sixth producer in the pool in which activity has but recently started and has been gaining during the past few weeks. This test set 5⅞-inch casing at 2,525 feet preparatory to drilling in and should be completed this week. This crude is bringing $1.03 per barrel and is being taken by two refineries nearby and a pipe line which connects with a loading rack on the Santa Fe at Benoit from which point it is shipped to Canadian refineries.

There were 15 completions reported in the Permian Basin this week, 14 of these proving producers and being scattered over various counties.

Ector County

The half mile extension test of Atlantic Oil Producing Co. on the Jones tract in Section 36, Block 43, Township 1s, T.&P. Survey, in the Addis Pool, Ector County, is shut down at 4,202 feet with 200 feet of oil in the hole. It will make a small well but will limit the field on the east. It may be treated with acid or given a shot.

Stanolind Oil & Gas Co. made locations for two more tests in the Cowden area, northern Ector County. These will be carried as No. 4 and No. 5 Cowden.

Frank Gilpin, Jr. and others' No. 1 Blakeney, outpost test of the Cowden area, northern Ector County, struck its first gas this week at 3,990-95 feet. Seven-inch casing was previously cemented at 3,940 feet. It is drilling below 4,010 feet in gray lime. Location is in Section 22, Block 43, Township 2s, T.&P. Survey, approximately 2 miles southwest of the nearest Cowden producer.

Ward County

The California Co.'s No. 1 Durgin, in Section 15, Block 34, H.&T.C. Survey, southern Ward County, was completed as one of the best wells in the county. It made an initial production of 765 bbls. at a total depth of 2,526 feet. Top of pay was logged at 2,280 feet with an increase at 2,316 feet.

There were 10 locations staked in the district during the week, 4 in the Scarborough area, northern Winkler County.

Loving County

Eppenauer Drilling Co. is treating the first Loving County well with acid. One thousand gallons was to be injected into its No. 1-C Allen in Section 90, Block 1, W.&N.W. Survey. The well was previously given a shot of 180 quarts from 4,264-4,309 feet developing 103 bbls. of oil the first 24 hours, flowing about half this amount later. Total depth is 4,309 feet to where hole was plugged back 2 feet before shooting. If the acid treatment proves successful other operators will probably treat all the wells in the field. The high gravity sweet oil has a ready sale to El Paso refineries.

Reagan County

The one-half mile northeastern extension to Ordovician production in the Big Lake Field, Reagan County, Big Lake Oil Co.'s No. 13-C University in Section 25, Block 9, drilled to a total depth of 8,618 feet and flowed 986 bbls. in the 24 hours ending 7 a. m., January 6. It previously made 1,030 bbls. during the 24 hours ending 7 a. m., January 2.

RANGER AND WICHITA FALLS

Considerable lease trading has been taking place in the lime pay area in the Jefferson County School Lands Survey of Archer County. Continental Oil Co. recently made a trade for some leases and independent operators have been giving the area a strong play.

H. W. Imholtz and others of Abilene have purchased a 7,000-acre block centering in the northwest corner of the A. Roderiguez Survey, Haskell County, and are planning to drill a 6,500-foot unitized test. There are only six producers of oil and one gasser in this county, all producing from a 1,700-foot pay horizon. The recently assembled block is to the east of these producers which were drilled in 1929.

The wildcat test of Oplin Oil & Gas Co. on the Irwin ranch in southwest Callahan County is swabbing only 4 bbls. of oil and 20 bbls. of sulphur water per hour from the Ellenberger lime. This test looked like a new wildcat discovery from this deep horizon, but the water will no doubt lead the operators to abandon it, as has been done with other deep tests in this area which also had good showings of oil, making a little oil with water. Total depth is 4,490 feet.

Humble Oil & Refining Co. has sold 80 acres containing 11 wells having a daily average of 52 bbls. to Roeser & Pendleton. These wells are in the Cook Pool, Shackelford County, and the purchase gives ownership to all the production in the pool which is being repressured with gas from another field in the county.

Production in the Wichita Falls district averaged 57,270 bbls. per day during the week. This is a decrease of nearly 190 bbls. under the past week's figures.

The daily average production of the Panhandle district was 40,415 bbls. for the week. This was an increase of 1,445 bbls. over the past week's daily average.

Wildcat Operations in West Texas

Week Ending January 8

Company, well, farm name, section and block—	Remarks:
ANDREWS COUNTY	
Fuhrman Pet. Co.'s No. 1-B Bonner, 1,320 ft. from N line and 1,320 ft. from E line of Sec. 25, Blk. A-42, P.S.L. Sur.	Derrick.
BREWSTER COUNTY	
C. M. Joiner's No. 1 McIntyre	S.D. 1,306 ft.
CRANE COUNTY	
Continental Oil Co.'s No. 2-C Cowden, 330 ft. from N line and 1,650 ft. from W line, Sec. 81, Blk. X, C.C.S.D.R.G.&N.G. Sur.	T.D. 2,495 ft.; 850 ft. oil in hole.
Gulf Prod. Co.'s No. 1 Edwards, 330 ft. from S line and 330 ft. from E line of Sec. 21, Blk. B-18, Public School Land Sur.	Reaming 3,300 ft.
CROCKETT COUNTY	
Porter Rankin's No. 1 Todd, 1,500 ft. from N line and 2,020 ft. from E line of Sec. 68, Blk. UV, G.C.&S.F. Sur.	Machine on ground.
ECTOR COUNTY	
Atlantic Oil & Prod. Co.'s No. 1 Holt, 1,980 ft. from N line and 660 ft. from E line of Sec. 19, Blk. A, P.S.L. Sur.	Drlg. 3,965 ft.
Atlantic Oil & Prod. Co.'s No. 3 Holt, 660 ft. from N line and 1,980 ft. from E line of Sec. 19, Blk. A, P.S.L. Sur.	Location.
Atlantic Oil & Prod. Co.'s No. 1 Jones, 2,310 ft. from N line and 440 ft. from W line of Sec. 36, Blk. 43, Twp. 2s, T.&P. Sur.	Drlg. 4,108 ft.; 200 ft. oil in hole.
Broderick & Calvert's No. 1 Cowden, 1,980 ft. from S line and 1,980 ft. from N line of Sec. 16, Blk. 43, Twp. 2s, T.&P. Sur.	Drlg. 1,970 ft.
Continental Oil Co.'s No. 1 Holt, 660 ft. from W and 1,980 ft. from S line of Sec. 20, Blk. A, P.S.L. Sur.	Drlg. 1,585 ft.
Gilpen et al's No. 1 Blakeney, 330 ft. from S, 440 ft. from E line of Sec. 32, Blk. 43, Twp. 1n, T.&P. Sur.	Drlg. 3,975 ft.
Harrison et al's No. 2 Addis, 990 ft. from N line and 2,200 ft. from W line of Sec. 35, Blk. 43, Twp. 2s, T.&P. Sur.	Fishing; T.D. 3,836 ft.
Harrison et al's No. 3 Addis, 1,650 ft. from N line and 2,200 ft. from W line of Sec. 35, Blk. 43, Twp. 2s, T.&P. Sur.	Location.
Humble Oil & Ref. Co.'s No. 1 H. Pegues, 330 ft. from N and 440 ft. from E line of Sec. 38, Blk. 43, T.&P. Sur.	Rigging up rotary.
Fred Turner's No. 2-A Addis, 2,310 ft. from N and 440 ft. from E of Sec. 35, Blk. 43, Twp. 2s, T.&P. Sur.	Completed water well.
Stanolind Oil & Gas Co.'s No. 4 J. M. Cowden, 660 ft. from N and 1,980 ft. from E line of Sec. 27, Blk. 43, Twp. 1n, T.&P. Sur.	Location.
Stanolind Oil & Gas Co.'s No. 5 J. M. Cowden, 660 ft. from N and 1,980 ft. from E line of Sec. 34, Blk. 43, Twp. 1n, T.&P. Sur.	Location.

(Continued on Page 47)

COMPLETIONS IN WEST TEXAS

Ector County

Skelly Oil Co.'s No. 1 F. U. Addis, top pay 3,840 feet, increase at 3,941 feet, gas pay 3,750-3,825 feet, elevation 2,932 feet, shot 320 quarts from 3,840-3,969 feet, initial production 155 bbls. flowing per day on proration test, total depth 4,108 feet.

Glasscock County

Noble Drilling Co.'s No. 2 Baker, top pay 2,171-78 feet, initial production pumping 1,286 bbls. per day on proration test, total depth 2,182 feet. Simms Oil Co.'s No. 3-A Coffee, top pay 2,094-2,160 feet, initial production pumping 830 bbls. per day on proration test, total depth 2,136 feet.

Howard County

Plymouth Oil Co.'s No. 9 Kloh and others, top pay 2,355-62 feet, initial production pumping 1,140 bbls. per day on proration test, total depth 2,390 feet. Schermerhorn's No. 7 Kloh, top pay 2,-339 feet, increase at 2,492 feet, initial production 1,269 bbls. pumping per day on proration test, 22 per cent water, total depth 2,500 feet

Irion County

Bristol and others' No. 2 Nutt, initial production 30 bbls. per day pumping, total depth 1,475 feet.

Menard County

L. G. Priest and others' No. 1 Sorrell, dry and abandoned, total depth 2,904 feet.

Pecos County

Mid-Kansas Oil & Gas Co.'s No. 22 Smith-Taylor, top pay 1,252 feet, initial production 286.69 bbls. per hour, total depth 1,400 feet; No. 11-H Yates, top pay 1,480 feet, initial production 2,590 bbls. per hour, total depth 1,675 feet. Easter and McCurdy's No. 3-A Shell-Smith, top pay 820-40 feet, initial production 30 bbls. per day pumping, total depth 846 feet.

Reagan County

Big Lake Oil Co.'s No. 12-C University, top pay 8,846 feet, initial production flowing 180 bbls. per day with unknown quantity of water, total depth 8,-857 feet.

Ward County

Abell Brothers' No. 1 Llano-Owens, top pay 2,695 feet, shot 110 quarts from 2,917-61 feet, shot 180 quarts from 2,-996-3,038 feet, flowing 87 bbls. per day on proration test, total depth 3,041 feet.

(Continued on Page 46)

Long Lake Area Defined on West and Southeast; East Texas to Ask Increase in Allowable

By L. E. BREDBERG

DALLAS, Tex., Jan. 8.—The Long Lake area in southwest Anderson County is now defined on the west and to the southeast by the two tests being completed by the joint owners of the some 24,000-acre block centering in the Monnig farm. If a pool of importance is to be proved in the area it will have to extend to the north and northeast. Tide Water Oil Co. and Texas Seaboard Oil Co. hold approximately all of the block on which one small producer has been discovered and two more tests are now in process of completion. One dry hole has been drilled by Humble Oil & Refining Co. approximately 2¾ miles to the northwest of the discovery well, thereby eliminating the field from extending a great distance in that direction.

Tide Water Oil Co. and Texas Seaboard Oil Co.'s No. 2 Monnig, 1,816 feet due west of the discovery well, drilled to a total depth of 5,351 feet, set 2½-inch tubing 40 feet off bottom and washed for one and one-half hours. It started flowing salt water through two 2-inch flow lines with three-eighths inch choke on the casing and tubing, flowing a 2-inch stream of fluid, of which only 3 per cent was oil. The gas volume was estimated at 15,000,000 feet. After the gas was shut in for an hour it built up a 2,140-pound pressure. After making this poor showing it was plugged back to 5,260 feet, where it is now standing cemented.

The test apparently can make little more than a small oiler, if that, and may prove to be only a gasser. It ran considerably lower on structure than the discovery well, which, coupled with its present showing, gives little encouragement to the field being extended any distance to the west.

The same companies' No. 3 Monnig (Long Lake Plantation), approximately three-quarters of a mile southeast of the discovery well, ran approximately 15 feet lower on the top of the Woodbine section than the discovery and should have better chance of making a producer than No. 2 test. This third test topped the last sand at 5,276 feet. The first 6 inches of the core showed sand with a slight showing of oil. Coring was stopped at 5,281 feet and 7-inch casing set at 5,148 feet. The hole may be plugged back before a test is made, thereby eliminating chances of salt water coming in as it did in the discovery and No. 2.

Unless a pool of major importance is opened to the north and northeast of the discovery well this area cannot be carried on the East Texas reports as a 1933 major discovery, which witnessed the opening of no other oil pool during those 12 months.

Leon County

The Leon County gas area remains to be proven as an oil-producing area also in order to be classed as a 1933 oil discovery. The first test drilled on the some 17,500-acre block held by Shell Petroleum Corp. and others proved to be a dry hole and the second test only a gas well, although it is making about 125 gallons of distillate a day. Two more tests are now drilling on this block. No. 1 Jones, in the J. F. Summeralls Survey, between the dry hole and the gasser, topped the Pecan Gap chalk at 4,053 feet and is drilling in hard chalk at 4,150 feet. Derrick floor elevation is 393 feet. Correlations with the other two tests show this third test to be running 48 feet higher on this formation than No. 1 Beggs, the gas well, and 52 feet higher than the dry hole. However, the Pecan Gap chalk cannot be relied upon as a definite indicator, the Austin chalk, which is the deeper formation, being considered more accurate as it is closely connected with the Woodbine sand.

Shell Petroleum Corp. and others' No. 1 G. W. Lee, in the William Cooper Survey, 2 miles northeast of the Phillips dry hole in this area of Leon County, is shut down after setting 87 feet of 20-inch casing.

E. L. Smith Oil Co.'s No. 1 Simpson, in the Al Penn Survey, approximately midway between the Leon County gasser and the Long Lake area in Anderson County, but located in Leon County, is drilling at 4,770 feet in shale and streaks of lime. This test topped the Pecan Gap chalk at 4,281 feet and logged the base at 4,369 feet. Elevation is 270 feet.

Gholson Drilling Co. has staked a location approximately 4 miles south of the Long Lake discovery, on the Alliance Trust Co. land in the Simon Sanches Survey No. 9. Footage is 330 feet from the northwest line and 20,400 feet from the southwest line of the survey in Leon County.

Freestone County

The northeastern Freestone County test of the Daniels Oil & Royalty Co. on the J. F. Young farm in the L. Liggins Survey, failed to show oil or gas on several drill stem tests and is now shut down at 4,371 feet. Seven-inch casing was set at 4,350 feet. Elevation is 345 feet.

General Crude Oil Co.'s (Cranfill & Reynolds) No. 1 Southern Pine Lumber Co. in the N. Arrington Survey, Cherokee County wildcat, was abandoned this week at a total depth of 5,170 feet. Elevation was 348 feet. This was one of the interesting wildcats of East Texas and blots out another possible producing area.

Interesting wildcats in East Texas are now few and far between with the majority of attention still riveted on the two Long Lake tests in Anderson County. Unless they prove producers, or other tests in this area and the Leon County area prove producers, much interest formerly displayed in the southern tier of counties of the district will undoubtedly be lost.

Locations for other wildcats in the district have been extremely low during the past few weeks, and this week only one location, that of the Gholson Drilling Co. in Leon County, was reported. As soon as one or perhaps both of the tests now in process of completion in the Long Lake area are completed the two companies holding the surrounding block will no doubt make location for a fourth test, to the north or northeast. This will be exceptionally interesting and prove what may be expected in this area. Such a test will either open an extension and move the pool in one of those directions or limit it to but a small area with small producing wells unless future tests prove much better than the discovery.

EAST TEXAS FIELD

Distribution reports from East Texas continue to show a draft from storage. During the week the daily average trunk line runs were 400,805 bbls. per day. Local refineries handled a daily average of 54,320 bbls. and tank car shipments held their extremely low average of 290 bbls. per day. Total daily average distribution was 455,415 bbls., while daily average production ran only 408,840 bbls. There probably is a small amount of "hot oil" still being produced, but since Federal Judge Randolph Bryant issued a temporary injunction at Sherman on December 22 against several producers and refiners, there has been a reported decline in the production of illegal oil.

The three-judge Federal court which heard the case of the Amazon Oil Corp. against the Railroad Commission and the oil enforcement authorities of the Federal Government in Houston in December, has granted a four-day stay on the limit for filing briefs in that case, as requested by the plaintiffs' counsel. This will extend the time when the court begins consideration of its decision since both sides have 10 days to answer briefs. Decision will probably not be handed down until the latter part of the month or the fore part of February.

Injunction Suits

Six additional suits were filed against East Texas operators and refiners in the Federal Court for the Eastern District of Texas by Charles I. Francis, Special Assistant United States Attorney General, in advance of a hearing before Federal Judge Randolph Bryant in regard to new writs in those cases and renewals or extensions of those against the McMurrey corporation and Anding & Potter.

F. W. Fischer, representing the Como Oil Co., filed suit in this court against Lon A. Smith, alleging the latest proration order of the Railroad Commission is invalid.

Suits filed by Mr. Francis were: United States vs. W. W. Bradley and M. Blake; United States vs. L. M. Harris, J. C. Harris and J. T. Harris; United States vs. Arrow Refining & Producing Co.; United States vs. Amazon Petroleum Corp. and D. B. Reed; United States vs. Charles M. Cope; United States vs. Locke Drilling Co., N. S. Locke and C. C. Ashton.

Judge Randolph Bryant has indicated he would continue in effect the injunctions against the McMurrey corporation and Anding & Potter.

There are still 16 refineries shut down in the field and with overproduction dwindling the market should have been strengthened. However, independent stations continue to sell gasoline below the price agreed upon by the majority of marketing units and dealers and a gasoline fight has started in Fort Worth, East Texas gasoline being responsible. It is believed, however, this "war" will be of short duration.

Effective January 9 the aggregate output of East Texas oil will be reduced without changing the order permitting production of 5 per cent of the hourly potential of wells. The change will be made by putting into effect a list of corrected well potentials, based on a series of tests made in the field by the engineering department of the Railroad Commission. Decline in the potential rating of numerous wells makes the aggregate total less without changing the 5 per cent rule. The daily allowable is now 399,187 bbls. However, Lon A. Smith, chairman of the Texas Railroad Commission, is planning to go to Washington this week to discuss an increase in the

East Central Texas Wildcats

Week Ending January 8

Company, well, farm name, section and block—	Remarks
ANDERSON COUNTY	
Standard of Kansas' No. 1 A. W. Johnson, 565 ft. from N line, 420 ft. from E and W lines of 22.8-ac. tract, Simon Sanches Sur.	Derrick.
Tide Water Oil Co. and Texas Seaboard Oil Co.'s No. 2 Long Lake Plantation, 1,866 ft. due W of Tide Water and Texas Seaboard Oil Co.'s No. 1 Long Lake, Simon Sanches Sur.	Showed salt water with approx. 3 per cent oil and est. 20,000,000 ft. of gas; plugging back; T.D. 5,352 ft.
Tide Water Oil Co. and Texas Seaboard Oil Co.'s No. 3 Long Lake Plantation, 2,732 ft. S of No. 1, 2,799 ft. E at R/A, Simon Sanches Sur. No. 1	Prepare to set csg.; T.D. 5,281 ft.
ANGELINA COUNTY	
H. C. Jennings et al's No. 1 G. E. Davidson, 150 ft. out of SE cor. of Davidson tract, G. Messingill Sur.	S.D. 1,015 ft.
BOWIE COUNTY	
R. W. Lynn and W. R. Rolfe's No. 1 Mrs. R. D. Hart, 330 ft. out of NE cor. of Hart 20-ac. tract, 1 mile E of Nash, Thomas Price Sur.	Location.
CHEROKEE COUNTY	
A. R. Lewis et al's No. 1 J. Bradford, 1,600 ft. from W line and 200 ft. from N line of 50-ac. tract, J. Laprelia Sur.	Derrick.
A. F. Richardson's No. 1 P. Wood, 660 ft. from N line, 3,300 ft. from E line of 495-ac. tract, 14 miles E of Jacksonville, on Cherokee-Rusk County line, Ignacio Sanches Sur.	Derrick.
ELLIS COUNTY	
Beckham et al's No. 1 L. S. R. Wood, 150 ft. from N line, 330 ft. from E line of Wood 186-ac. tract, A. D. Lagarza Sur.	Rig up.
FRANKLIN COUNTY	
Van Emon et al's No. 1 O. S. Maxton, 910 varas W, 910 varas S of NE cor. of survey, John Brown Sur.	Derrick.
FREESTONE COUNTY	
Clyde Creighton's No. 1 Holly Bros., 854 ft. from W and center N and S lines of lease, A.B.&M. Sur.	Cleaning out; T.D. 5,260 ft.
Daniels Oil & Royalty Co.'s No. 1 T. F. Young, 750 varas from W line, 250 varas from S line of survey, L. Liggins Sur.	Waiting on csg.; T.D. 4,391 ft.
Hughes et al's No. 1 H. A. Shaw, 330 ft. out of NE cor. of H. A. Shaw 138-ac. tract, Simon Sanches Sur. No. 5	Location.
GREGG COUNTY	
Max Rubin's No. 1 Sam Burton, 330 ft. out of NW cor. of 100-ac. lease, D. Sanches Sur.	Building derrick.
Paul T. Rutledge's No. 1 M. T. Cole, 1,081 ft. S, 272 ft. E of NE cor. of Tide Water's Lacy lease, M. T. Cole Sur.	Derrick.
Teton Oil Co.'s No. 1 E. Stell et al, 330 ft. from N line, 50 ft. from W line of 119.92-ac. tract, John Wilkerson Sur.	Drlg. plug; T.D. 3,530 ft.

(Continued on Page 47)

Texas oil allowable for the quarter starting April 1.

Companies continue to purchase as much stored or other oil as possible and are purchasing producing properties whenever they can find a vendor in the field. Humble Oil & Refining Co. has just closed a deal whereby it acquired three leases containing 70 acres and 11 wells, paying around $5,000 per acre and $20,000 additional per well. It purchased the L. A. Rodden 10-acre tract with two wells in the Crosby Survey, 35-acre F. E. Stancial tract with six wells in Thompson-Allen Survey, both in Gregg County; also a 25-acre H. W. Mayer tract in the McGee Survey, with three wells. The latter is in Upshur County. All are standardized ready for pumping.

COMPLETIONS IN EAST TEXAS

North Gregg County

Abernathy and Kirkpatrick's No. 6 R. M. Wood, top sand 3,642 feet, initial production 80 bbls. per hour through open tubing, total depth 3,670 feet. Atlantic Oil Producing Co.'s No. 26-A Burnside, top sand 3,627 feet, initial production 60 bbls. in one-half hour through open tubing, total depth 3,554 feet. Cox and Hamon's No. 13 L. A. Rodden, top sand 3,570 feet, initial production 120 bbls. per hour through one-quarter inch tubing choke, total depth 3,605 feet. F. H. E. Oil Co.'s No. 6 R. Christian, top sand 3,605 feet, initial production 35 bbls. in one-half hour through open tubing, total depth 3,634 feet. Magnolia Petroleum Co.'s No. 13 W. E. Jones, top sand 3,662 feet, initial production 120 bbls. per hour through open tubing, total depth 3,686 feet; No. 10 Todd-Stinchcomb, top sand 3,568 feet, initial production 130 bbls. per hour through open tubing, total depth 3,574 feet. Meridian Oil Co.'s No. 9 T. W. Lee, top sand 3,589 feet, initial production 35 bbls. in one-quarter hour through open tubing, total depth 3,597 feet. O. W. R. Oil Co.'s No. 4 C. E. Davis, initial production 80 bbls. per hour through open tubing, total depth 3,662 feet.

Charles Pettit's No. 4 M. O. Sheppard, top sand 3,552 feet, initial production 45 bbls. in one-half hour through open tubing, total depth 3,601 feet. Rajo Oil Co.'s No. 5 J. C. Barrett, top sand 3,647 feet, initial production 75 bbls. per hour through open tubing, total depth 3,668 feet. Sun Oil Co.'s No. 9 Mose Thomas, top sand 3,469 feet, initial production 55 bbls. per hour through open tubing, total depth 3,520 feet. J. O. Whittington's No. 5 J. C. Bumpass, top sand 3,525 feet, initial production 120 bbls., total depth 3,575 feet. Woodley-Atlantic Oil Producing Co.'s No. 5 Martin Hayes, top sand 3,509 feet, initial production 70 bbls. per hour through open tubing, total depth 3,545 feet. Yount Lee Oil Co.'s No. 10-A Davis, top sand 3,513 feet, initial production 61 bbls. per hour through open tubing, total depth 3,527 feet.

South Gregg County

American Liberty Oil Co.'s No. 12 L. P. Griffin, top sand 3,546 feet, initial production 28 bbls. in one-quarter hour through open tubing, total depth 3,570 feet. Elliott and others' No. 1 Benson, top sand 3,640 feet, initial production 70 bbls. in one-quarter hour through open tubing, total depth 3,646 feet. C. P. Greenwood's No. 3 Loughridge, top sand 3,726 feet, initial production 28 bbls., total depth 3,731 feet. Magnolia Petroleum Co.'s No. 7 G. Davis, top sand 3,624 feet, initial production 16 bbls. per hour through open tubing, total depth 3,631 feet. Rhoads Drilling Co.'s No. 23 Sabine River, top sand 3,515 feet, initial production 50 bbls. per hour through open tubing, total depth 3,538 feet. T. L. James & Co.'s No. 7 Sabine River, top sand 3,556 feet, initial production 100 bbls. per hour through open tubing, total depth 3,573 feet. Shell Petroleum Corp.'s No. 32 J. R. Watson, top sand 3,635 feet, initial production 45 bbls. in one-half hour through open tubing, total depth 3,635 feet. Sinclair Prairie Oil Co.'s No. 16-A A. Lockhart, top sand 3,593 feet, initial production 25 bbls. in one-quarter hour through open tubing, total depth 3,603 feet. Sun Oil Co.'s No. 27 M. T. Cole, top sand 3,520 feet, initial production 59 bbls. per hour through open tubing, total depth 3,545 feet. Texas Co.'s No. 26 M. T. Cole, top sand 3,517 feet, initial production 73 bbls. per hour through open tubing, total depth 3,551 feet. C. J. Webster's No. 3 L. Martin, top sand 3,709 feet, initial production 25 bbls. per hour through open tubing, total depth 3,712 feet.

North Rusk County

Black & Stroube's No. 4 Jernigan, top sand 3,679 feet, initial production 50 bbls. in 45 minutes through open tubing, total depth 3,713 feet. C. M. Cope's No. 1 Taylor, top sand 3,565 feet, initial production 20 bbls. in three hours' pumping, total depth 3,606 feet. East Texas Refining Co.'s No. 14 D. Wills, top sand 3,661 feet, initial production 60 bbls. per hour through open tubing, total depth 3,676 feet. Humble Oil & Refining Co.'s No. 26-A S. S. Laird, top sand 3,640 feet, initial production 80 bbls. per hour through open tubing, total depth 3,683 feet; No. 33-B S. S. Laird, top sand 3,581 feet, initial production 70 bbls. per hour through open tubing, total depth 3,642 feet; No. 9-B W. P. Moore, top sand 3,660 feet, initial production 92 bbls. per hour through open tubing, total depth 3,696 feet.

Jones and Atlantic Oil Producing Co.'s No. 4-A M. A. Peterson, top sand 3,659 feet, initial production 100 bbls. per hour through open tubing, total depth 3,715 feet. Jones and Reserve Petroleum Co.'s No. 6 D. Wills, top sand 3,657 feet, initial production 75 bbls. per hour through open tubing, total depth 3,663 feet. Sun Oil Co.'s No. 12 J. R. Bealle, top sand 3,603 feet, initial production 83 bbls. per hour through open tubing, total depth 3,611 feet. Turman Oil Co.'s No. 8-B Brightwell, top sand 3,619 feet, initial production 35 bbls. in one-quarter hour through open tubing, total depth 3,652 feet. Wheelock & Collins' No. 9 D. Wills, top sand 3,675 feet, initial production 100 bbls. per hour through open tubing, total depth 3,683 feet.

South Rusk County

Ajo Oil Co.'s No. 3 Joe Lee, top sand 3,751 feet, initial production 38 bbls. in 33 minutes through open tubing, total depth 3,780 feet. American Liberty Oil Co.'s No. 13 R. W. Fair, top sand 3,598 feet, initial production 10 bbls. in six minutes through open tubing, total depth 3,624 feet. East Texas Refining Co.'s No. 4 Foster-Barksdale, top sand 3,714 feet, initial production 25 bbls. in one-quarter hour through open tubing, total depth 3,673 feet; No. 4-C Glen Pool, top sand 3,685 feet, initial production 22 bbls. in one-quarter hour through open tubing, total depth 3,725 feet. Falcon Oil Co.'s No. 7 Perkins, top sand 3,641 feet, initial production 33 bbls. in one-quarter hour through open tubing, total depth 3,649 feet. George Greer's No. 3 R. P. Grambling, top sand 3,620 feet, initial production 40 bbls. through open tubing, total depth 3,750 feet.

Humble Oil & Refining Co.'s No. 4-B F. Bagwell, top sand 3,671 feet, initial production 78 bbls. through three-quarters inch tubing choke, total depth 3,750 feet; No. 30 W. L. Price, top sand 3,690 feet, initial production 50 bbls. through three-quarters inch tubing choke, total depth 3,792 feet. Hunt Production Co.'s No. 9-B Ashby, top sand 3,620 feet, initial production 20 bbls. in 49 minutes' pumping, total depth 3,652 feet; No. 10-D Bradford, top sand 3,565 feet, initial production 20 bbls. in two hours' pumping, total depth 3,649 feet. Illinois Oil Co.'s No. 3 Florence, top sand 3,704 feet, initial production 80 bbls. per hour through open tubing, total depth 3,708 feet. Johnson & Rogers' No. 5 C. W. Mullins, top sand 3,758 feet, initial production 42 bbls. in one-half hour through open tubing, total depth 3,760 feet.

Mid-Kansas Oil & Gas Co.'s No. 54 M. M. Cross, top sand 3,624 feet, initial production 76 bbls. per hour through open tubing, total depth 3,645 feet; No. 67 M. M. Cross, top sand 3,616 feet, initial production 60 bbls. per hour through open tubing, total depth 3,618 feet; No. 56 W. T. Grissom, top sand 3,650 feet, initial production 96 bbls. per hour through open tubing, total depth 3,660 feet. Spansco Oil Co.'s No. 7 W. P. Brett, top sand 3,708 feet, initial production 26 bbls. in one-quarter hour through open tubing, total depth 3,748 feet. Standard of Kansas' No. 2 J. R. Irion, top sand 3,773 feet, initial production 40 bbls. in one-half hour through open tubing, total depth 3,776 feet. Stanolind and Pure Oil Co.'s No. 25 Moores, top sand 3,613 feet, initial production 20 bbls. in 26 minutes through open tubing, total depth 3,666 feet. Texas Co.'s No. 11 J. W. Wilson, top sand 3,648 feet, initial production 87 bbls. per hour through open tubing, total depth 3,671 feet. Tide Water Oil Co.'s No. 14 Pinkston, top sand 3,752 feet, initial production 20 bbls. in one-quarter hour through open tubing, total depth 3,790 feet.

Smith County

Professional Oil Co.'s No. 4 T. O. Wright, top sand 3,673 feet, initial production 313 bbls. in 24 minutes through open tubing, total depth 3,694 feet.

Upshur County

Humble Oil & Refining Co.'s No. 8 J. Phillips, top sand 3,647 feet, initial production 54 bbls. per hour through open tubing, total depth 3,688 feet. Stroube and Stroube's No. 11 R. J. Mackey, top sand 3,608 feet, initial production 50 bbls. per hour through open tubing, total depth 3,612 feet. Sun Oil Co.'s No. 3 O'Byrne, top sand 3,722 feet, initial production 30 bbls. per hour through open tubing, total depth 3,724 feet.

WILDCAT COMPLETIONS

Cherokee County

General Crude Oil Co.'s No. 1 Southern Pine Lumber Co., top Midway 2,760 feet, top Navarro 3,290 feet, top Pecan Gap 3,966 feet, base 4,383 feet, top broken Austin chalk 4,894 feet, top hard Austin chalk 4,924 feet, base Austin chalk 5,120 feet, top Woodbine sand 5,146 feet, top Red Beds 5,169 feet, elevation 348 feet, dry and abandoned, total depth 5,170 feet (N. Arrington Survey).

Red River County

L. G. Priest's No. 1 R. W. Peek, dry and abandoned, total depth 2,765 feet (E. F. Mitcheson Survey).

West Texas Fields

(Continued from Page 44)

Sinclair Prairie Oil Co.'s No. 3 Archenhold, top pay 2,615 feet, initial production 277 bbls. per day pumping on proration gauge, total depth 3,043 feet. California Oil Co.'s No. 1 Durgin, top pay 2,221 feet, increase at 2,316 feet, initial production 765 bbls. per day, total depth 2,526 feet. S. A. Thompson's No. 3-B Johnson, top pay 2,280 feet, initial production 554 bbls. per day on proration test, total depth 2,534 feet.

COMPLETIONS IN RANGER

Callahan County

Ed Gulling and others' No. 1 J. A. Reid, dry and abandoned, total depth 640 feet.

Coleman County

R. H. Murray and others' No. 1 R. E. Harris, dry and abandoned, total depth 2,360 feet. Continental Oil Co.'s No. 12 M. T. Overall, dry and abandoned, total depth 3,308 feet. Dave Duncan's No. 1 E. W. Polk, oil sand 1,332-39 feet, initial production 2 bbls., total depth 1,341 feet.

Shackelford County

Albany Oil Co.'s No. 6 Jeter, show of oil 882-95 feet, initial production 60 bbls., total depth 896 feet. Lowe and Dulaney's No. 1 Ackers, show of oil 1,478-79 feet, initial production 8 bbls., total depth 1,485 feet. Poly Oil Co. and others' No. 2 Spears, dry and abandoned, total depth 780 feet. A. C. Walker's No. 1 B. S. Walker, show of oil 407-17 feet, initial production 5 bbls., total depth 417 feet.

Stephens County

W. G. Carter's No. 1 J. M. Cook, dry and abandoned, total depth 2,086 feet. Magnoll and others' No. 2 F. A. Manning, dry and abandoned, total depth 3,281 feet.

COMPLETIONS IN WICHITA FALLS DISTRICT

Archer County

W. B. Hamilton's No. 20 Abercrombie, sandy lime 1,192-1,204 feet, initial production 117 bbls., total depth 1,204 feet, treated with acid; No. 23 Abercrombie, lime 1,190-1,204 feet, initial production 80 bbls., total depth 1,204 feet, treated with acid; No. 8 Cartwright, sandy lime 1,164-78 feet, initial production 200 bbls., total depth 1,178 feet, treated with acid; No. 9 Cartwright, sandy lime 1,160-74 feet, initial production 165 bbls., total depth 1,174 feet, treated with acid; No. 1 Graham, dry and abandoned, total depth 1,158 feet; No. 10 Ikard, sandy lime 1,153-61 feet, initial production 120 bbls., total depth 1,161 feet, treated with acid. Helena Oil & Gas Co.'s No. 7 Ray, oil sand 1,117-21 feet, initial production 50 bbls. of oil and 5 bbls. of salt water, total depth 1,121 feet. King Royalty Co.'s No. 1 McCannally, dry and abandoned, total depth 1,500 feet. Ozozo Oil Co.'s No. 1 K. K. Cox, dry and abandoned, total depth 1,013 feet. G. L. Pace's No. 6 Arnold, sandy lime 1,149-58 feet, initial production 75 bbls., total depth 1,158 feet, treated with acid. Perkins and Cullum's No. 1 Andrews, dry and abandoned, total depth 1,025 feet; No. 3 Falls-Boyles, sandy lime 1,151-64 feet, initial production 250 bbls., total depth 1,164 feet; No. 4 Falls-Boyles, sandy lime 1,148-62 feet, initial production 75 bbls., total depth 1,162 feet. Petroleum Producers Co.'s No. 1 Prideaux, dry and abandoned, total depth 748 feet. Fain and McGaha's No. 13 Ferguson, oil sand 638-53 feet, initial production 15 bbls., total depth 653 feet; No. 14 Ferguson, oil sand 637-50 feet, initial production 13 bbls., total depth 650 feet; No. 15 Ferguson, oil sand 644-50 feet, initial production 10 bbls., total depth 650 feet. Hellams and Kress' No. 1 Jena, oil sand 664-67 feet, initial production 8 bbls., total depth 667 feet.

Huggins Oil Co.'s No. 1 Parkey, dry and abandoned, total depth 1,750 feet; Jennings and others' No. 1 Ferguson, dry and abandoned, total depth 660 feet. Whitehill Oil Corp.'s No. 22 Morrison, oil sand 665-73 feet, initial production 5 bbls., total depth 673 feet. C. I. Abercrombie's No. 4 Abercrombie, sandy lime 1,140-51 feet, initial production 40 bbls., treated with acid, total depth 1,151 feet. C. W. Boller's No. 11 Perkins, sandy lime 1,466-75 feet, initial production 50 bbls., total depth 1,475 feet, treated with acid. L. T. Burns' No. 1 W. L. King, dry and abandoned, total depth 1,348 feet. W. R. Cooper and others' No. 3 Hamilton, oil sand 1,099-1,108 feet, initial production 80 bbls., total depth 1,108 feet. Gi. Oil Co.'s No. 1 Perkins, sandy lime 1,430-38 feet, initial production 60 bbls., total depth 1,438 feet, treated with acid; No. 2 Perkins, sandy lime 1,424-36 feet, initial production 60 bbls., total depth 1,436 feet, treated with acid. Schultz and Weaver's No. 15 Green, sandy lime 1,134-50 feet, initial production 250 bbls., total depth 1,150 feet. Shappell Oil Co.'s No. 1 Taber, dry and abandoned, total depth 565 feet. Simms Oil Co.'s No. 1 Perkins, oil sand 1,441-46 feet, initial production 10 bbls., total depth 1,446 feet. Texas Co.'s No. 1 Andrews, oil sand 930-35 feet, initial production 50 bbls., total depth 935 feet. Womack Oil Co.'s No. 1 Perkins, sandy lime 1,469-80 feet, initial production 118 bbls., total depth 1,480 feet.

Wichita County

Aarco Oil Co.'s No. 20-A J. E. Roller, oil sand 460-72 feet, initial production 2 bbls., total depth 472 feet.

Montague County

Bridwell Oil Co.'s No. 1 Lay, dry and abandoned, total depth 1,833 feet. Carter and Rycade's No. 16 Cunningham, oil

sand 885-915 feet, initial production 30 bbls., total depth 915 feet.

Wilbarger County

John O'Neil's No. 8 Castleberry, dry and abandoned, total depth 1,562 feet.

Wise County

General Mineral Oil Co. and others' No. 1 Travellers Insurance Co., dry and abandoned, total depth 3,634 feet.

Throckmorton County

J. W. Robinson's No. 1 Mallock, dry and abandoned, total depth 410 feet.

Young County

Belknap Oil Co.'s No. 1 Belknap, oil sand 677-80 feet, initial production 100 bbls., total depth 680 feet. F. E. Butler's No. 1 Clareda, dry and abandoned, total depth 645 feet. Cable Oil Co.'s No. 4 A. Williams, oil sand 558-75 feet, initial production 30 bbls., total depth 588 feet. J. D. Dillard's No. 1 Baker, dry and abandoned, total depth 552 feet. N. B. Dollins' No. 1 Foster, dry and abandoned, total depth 585 feet. Maer & Hamilton's No. 7 Jeffery, dry and abandoned, total depth 856 feet. Panhandle Refining Co.'s No. 3 Morris, oil sand 570-73 feet, initial production 2 bbls., total depth 573 feet. Pitzer & West's No. 3 Williamson, sandy lime 2,875-90 feet, initial production 115 bbls., total depth 3,920 feet, treated with acid. A. H. and S. P. Schmitt's No. 1 Casey, dry and abandoned, total depth 900 feet. C. P. Sheldon's No. 1 Johnson, dry and abandoned, total depth 901 feet. Underwood Drilling Co.'s No. 2 Eichelberger, dry and abandoned, 850 feet. White Duncan's No. 6 Smith, dry and abandoned, total depth 725 feet; No. 9 Smith, oil sand 705-13 feet, initial production 40 bbls., total depth 713 feet. Worth Oil Co.'s No. 10 Snider, dry and abandoned, total depth 600 feet. Rathke Oil Co.'s No. 1 Johnson, lime 4,208-60 feet, initial production 10 bbls., total depth 1,260 feet, treated with acid.

COMPLETIONS IN PANHANDLE

Gray County

C. Back's No. 2 fee, gas from 2,321-90 feet, initial production 60,000,000 feet of gas, total depth 2,390 feet. Chism and others' No. 1 J. M. Carpenter, total depth 2,893 feet, plugged back to 2,690 feet, shot with 15 quarts, initial production 150 bbls. Magnolia Petroleum Co.'s No. 1 Webb, initial production 7,000,000 feet of gas, total depth 2,789 feet. Mid-Kansas Oil & Gas Co.'s No. 3 Webb, shot with 150 quarts from 2,493-2,525 feet, initial production 150 bbls., total depth 2,580 feet. Saulsbury Oil Co.'s No. 2 Cubine, gas 2,180-2,390 feet, initial production 4,000,000 feet of gas, total depth 2,390 feet. Continental Oil Co.'s No. 7 Finley-Brown, pay 2,943-54 feet, initial production 125 bbls. of oil and 25 bbls. of water, total depth 2,958 feet; No. 3 Wright, pay 2,797 feet, initial production 72 bbls. average for eight hours, total depth 2,870 feet.

Phillips Petroleum Co.'s No. 4 Coombs-Worley, pay 2,894-2,911 feet, initial production 1,135 bbls. of oil and 30 bbls. of water, total depth 2,940 feet; No. 7 Wright, pay 2,778-2,800 feet, initial production 1,185 bbls. for five-day average, total depth 2,875 feet. Sinclair Prairie Oil Co.'s No. 3 Coombs-Worley, pay 2,825-40 feet, initial production 840 bbls., total depth 2,869 feet. Texas Co.'s No. 8 Wright, pay 2,820-50 feet, initial production 365 bbls., total depth 2,855 feet.

Hutchinson County

Continental Oil Co.'s No. 2 Johnson, pay 3,104-13 feet, initial production 1,970 bbls., total depth 3,113 feet. J. E. Crosbie's No. 5 Pitts, pay 2,861-2,910 feet, initial production 140 bbls., total depth 2,935 feet. H. Steckol's No. 1 G. A. Whittenburg, shot with 100 quarts from 2,905-65 feet, initial production 45 bbls. of oil, total depth 2,990 feet. Texas Co.'s No. 2 Pond, shot with 40 quarts from 3,012-75 feet, initial production 125 bbls. on pump, total depth 3,085 feet.

Oldham County

Chambers and others' No. 1 Herring, junked and abandoned, total depth 4,000 feet.

TULSA GEOLOGICAL SOCIETY

E. F. Shea, geologist, Stanolind Oil & Gas Co., Tulsa, was elected president of the Tulsa Geological Society at the annual meeting held on the evening of January 8. He succeeds Ira H. Cram, Pure Oil Co. J. B. Leiser, assistant chief geologist, Shell Petroleum Corp., Tulsa, was elected first vice president, K. K. Kimball, consulting geologist, second vice president, T. F. Newman, Skelly Oil Co., Tulsa, secretary-treasurer, and Glen S. Dille, paleontologist for the Texas Co., Tulsa, editor. The council for the society is made up of R. E. Garrett, L. M. Neumann, S. H. Woods and J. B. Leiser.

East Central Texas Wildcats

(Continued from Page 45)

HENDERSON COUNTY

Campbell and Champlin's No. 1 R. S. Analey, 108 varas S, 623 varas W of NE cor. of lease, 6 miles SE of Buffalo, N. H. Thompson Sur. ..... Derrick.

HUNT COUNTY

Meade and McKennie's No. 1 Love, 300 ft. from N line, 6,300 ft. from W line of 95-ac. tract, John Gillisky Sur. ..... Rig up.

LEON COUNTY

Cooper et al's No. 1 W. H. Cozart, 1,000 ft. from SE cor. of 266-ac. tract in SW part of county, Thomas Gardner Sur. ..... Derrick.

Gholson Drilling Co.'s No. 1 Alliance Trust Co., 330 ft. S and E of Humble's Alliance Trust Co. 3,000-ac. tract, Simon Sanches Sur. No. 9 ..... Location.

Shell Petroleum Corp.'s No. 1 J. N. Jones, 800 ft. from N line of survey and 1,000 ft. from E line of survey, J. F. Summeralls Sur. ..... Drlg. 3,065 ft.

Shell Petroleum Corp.'s No. 1 Lee, 1,500 ft. from NW and SW line of farm and survey, William Cooper Sur. ..... Rig up.

E. L. Smith's No. 1 W. P. Simpson, 1,320 ft. from S and E lines of survey, Alfred Penn Sur. No. 693 ... Drlg. 4,518 ft.

Standard Oil Co. of Kansas' No. 1 A. W. Johnson, 466 ft. from NE line, 466 ft. from NW line of 100-ac. tract, Simon Sanches Sur. No. 7 ..... Location.

Sutton and Hawkins' No. 1 F. C. Wilson, 300 ft. out of NW cor. of Wilson 55-ac. tract, A. Ogden Sur... Spudded and S.D.

LIMESTONE COUNTY

C. M. Joiner et al's No. 1 S. A. Knapp, 1,000 ft. from N and W lines of tract and survey, 1¼ miles N of Falls County line, Luke Moore Sur. ..... S.D. 680 ft.

Lone Star Gas Co.'s No. 3 Barron, 1,853 ft. from W line, 1,390 ft. from N line of survey, E. Mabrey Sur. .... Drlg. 2,010 ft.

MORRIS COUNTY

Buchanan et al's No. 2 Staggers, 150 ft. from W line, 500 ft. from S line of survey, 8 miles NW of Daingerfield, John D. Nelson Sur. ..... Derrick.

NAVARRO COUNTY

H. T. Braselton et al's No. 1 H. L. Albritton, 150 ft. out of NW cor. of 100-ac. tract, 1¼ miles E of Roane. S.D. 1,250 ft.

RAINES COUNTY

J. W. Hallsell et al's No. 1 P. F. Jones, 400 ft. out of SW cor. of 22-ac. tract, 2½ miles S of Alba, B.B. B.&C. Sur. ..... Derrick.

UPSHUR COUNTY

Cranfill & Reynolds' No. 1 C. T. Crosby, 660 ft. from S and E lines of 190-ac. tract, 4,000 ft. E of Cranfill & Reynolds' No. 1 Rash, P. L. Clawer Sur. ..... S.D. 3,733 ft.

Manzell et al's No. 1 C. B. Mackey, 2,480 ft. from N line, 3,340 ft. from E line of survey, J. M. Pineda Sur. ..... Swabbing little oil; T.D. 3,737 ft.

B. F. Phillips' No. 1 Lad Johnson, 900 ft. from S line and 335 ft. from E line of lease, W. R. Stevens Sur. ..... Rig up.

VAN ZANDT COUNTY

J. O. Griffith's No. 1 Bruce & Gibbard, 1,000 ft. from S line, 330 ft. from E line of 134-ac. tract, G. Martinez Sur. ..... S.D. 200 ft.

Humble O. & R. Co.'s No. 1 S. R. Ray, 200 ft. S, 160 ft. W of J. D. Listenbee 30-ac. lease in Nacogdoches County School Lands Sur. ..... Set csg. 115 ft.

Pure Oil Co.'s No. 9 N. B. Clark, 730 ft. N of S line and 200 ft. E of W line of N. E. Clark and J. R. Houston 94.5-ac. tract, W. N. Black Sur. ..... Drlg. 3,000 ft. (no report).

Pure Oil Co.'s No. 9 W. F. Swain, 300 ft. S of N line and 450 ft. E of W line of W. F. Swain 40-ac. tract, John Walling Sur. ..... Set surface csg.

Ray Drlg. Co.'s No. 1 J. W. Mallory, 1,150 ft. from S line, 150 ft. from W line of 217-ac. tract, John Walling Sur. ..... Derrick.

Tom Sharp et al's No. 1-A M. L. Cox, 1,875 ft. from SE line and 1,800 ft. from SW line of 300-ac. tract, O. C. Nugent Sur. ..... Drlg. 1,150 ft.

Wildcat Operations in West Texas

(Continued from Page 44)

FISHER COUNTY

Condor Pet. Co.'s No. 1 Holley, 1,170 ft. W and 660 ft. from N lines of E half, Sec. 6, Blk. R, W. E. Richardson Sur. ..... Cellar.

Cranfill & Reynolds' No. 3 J. H. Young, 330 ft. W and 330 ft. S of NE cor. of survey, Sec. 208, B.B.B.&C. Sur. ..... Drlg. 200 ft.

Stanolind Oil & Gas Co.'s No. 3 F. Steele, 660 ft. from S and 2,310 ft. from W line of Sec. 210, Blk. 1, B.B.B.&C. Sur. ..... Material.

Merry Bros. and Perini's No. 1 J. J. Steele, 330 ft. E and 150 ft. N of SW cor. NE Sec. 210, B.B.B.&C. R.R. Sur. ..... Drlg. 2,405 ft.

Mid-Continent Petroleum Corp.'s No. 2 Pardue, 673 ft. from N and 330 ft. from E line of Sec. 202, B.B.B. &C. Sur., Blk. 1 ..... U.R. 10-in. csg. 1,950 ft.

Roeser and Hill's No. 1 Hill, 661 ft. from N and 330 ft. from E line of NW of Sec. 198, B.B.B.&C. Sur., Blk. 1 ..... Drlg. 2,400 ft.

E. L. Smith Oil Co.'s No. 1 fee, 450 ft. from S and 330 ft. from E, Sec. 203, Blk. 1, B.B.B.&C. Sur. ..... Moving in material.

Southern's No. 1 King, 660 ft. from N and 330 ft. from W line of SW Sec. 192, B.B.B.&C. Sur. ..... Drlg. 160 ft.

Southern Oil Co.'s No. 1-A Pardue, 2,310 ft. from S and 990 ft. from E lines of Sec. 202, B.B.B.&C. Sur. ..... Drlg. 2,770 ft.

Texas Inland Oil & Gas Co.'s No. 1 First National Bank of Hamlin, 1,980 ft. from N and 990 ft. from W, Sec. 191, Blk. 1, B.B.B.&C. Sur. ..... Drlg. 2,078 ft.

Texas Co.'s No. 4 T. A. Jean, 990 ft. from N and E lines of Sec. 201, Blk. 1, B.B.B.&C. Sur. ..... Location.

GAINES COUNTY

R. H. Gill et al's No. 1 Crews, 1,320 ft. from S and 1,320 ft. from W line of Sec. 9, Blk. A-20, P.S.L. Sur... Rigging up standard tools; T.D. 2,110 ft.

GLASSCOCK COUNTY

Continental Oil Co.'s No. 1 Gilbreath, 330 ft. from N line and 1,980 ft. from E line of Sec. 24, Blk. 33, Twp. 2s, T.&P.R.R. Sur. ..... Rig up standard tools; T.D. 2,155 ft.

Empire Gas & Fuel Oil Co.'s No. 2 Hall, 330 ft. from N and W lines of Sec. 21, Blk. 33, Twp. 2s, T.&P. Sur. ..... Spudding.

Humble Oil & Ref. Co.'s No. 3 Arrington, 330 ft. from N line and 330 ft. from E line of Sec. 21, Blk. 33, Twp. 2s, T.&P. Sur. ..... Pumped 19 bbls. per hour after acid treatment; T.D. 2,281 ft.

Humble Oil & Ref. Co.'s No. 2 Washer, 330 ft. from N and 1,650 ft. from E line of Sec. 20, Blk. 33, Twp. 2s, T.&P. Sur. ..... Drlg. 130 ft.

Humble Oil & Ref. Co.'s No. 4 Arrington, 330 ft. from N line and 990 ft. from W line, Sec. 22, Blk. 33, Twp. 2s, T.&P. Sur. ..... Drlg. 755 ft.

Lawson et al's No. 1-C Edwards, 1,259 ft. from E and 1,323 ft. from S line of Sec. 16, Blk. 33, Twp. 2s, T.&P. Sur. ..... Standardizing 1,100 ft.

Simms Oil Co.'s No. 4-A Coffee, 1,357 ft. from W and 1,370 ft. from S, Sec. 15, Blk. 33, Twp. 2s ..... Moving in rotary.

HOWARD COUNTY

L. C. Harrison et al's No. 2 Texas Land & Mortgage Co., 2,310 ft. from E line and 330 ft. from the S line of Sec. 4, T.&P.R.R. Sur., Blk. 30, Twp. 1s ..... Location.

Merrick & Lamb's No. 9 Chalk, 330 ft. from E line and 330 ft. from S line of lease, Sec. 135, Blk. 29, W.&N.W. Sur. ..... Drlg. 1,705 ft.

Plymouth Oil Co.'s No. 9 Kloh et al, 2,640 ft. from the N. line and 1,980 ft. from W line of Sec. 5, Blk. 33, T.&P.R.R. Sur., Twp. 2s ..... Pumping 1,140 bbls. per day; T.D. 2,390 ft.

Pure Oil Co.'s No. 14 Chalk, 1,650 ft. from N and 2,310 ft. from E, Sec. 125, Blk. 29, W.&N.W. Sur. ..... Location.

Schermerhorn Oil Co.'s No. 1 Kloh, Sec. 3, Blk. 33, Twp. 2s, T.&P. Sur. ..... T.D. 2,500 ft.; preparing to pump.

Joe Rusk et al's No. 3 G. M. Dodge Estate, 330 ft. from N line and 2,310 ft. from the E line of Sec. 9, H.&T.C.R.R. Sur., Blk. 30, Twp. 2s ..... Drlg. 1,870 ft.

Sinclair Prairie Oil Co.'s No. 9 Dodge, 310 ft. from N line and 1,625 ft. from W line of Sec. 11, Blk. 30, Twp. 1s, T.&P.R.R. Sur. ..... Pumping for test; T.D. 2,815 ft.

Southern Oil Co.'s No. 1 Denman, 2,310 ft. from N line and 330 ft. from W line of Sec. 10, Blk. 30, Twp. 1s, T.&P.R.R. Sur. ..... Drlg. 1,465 ft.

Ungren & Frazier's No. 1 Davis, 330 ft. from S line and 990 ft. from W line of Sec. 2, Blk. 30, Twp. 1s, T.&P. Sur. ..... Drlg. 2,535 ft.

IRION COUNTY

Williams-Short's No. 1 Gentry, 2,300 ft. from N line and 2,030 ft. from W line of Sec. 1, Blk. 3, H.&T.C. Sur... S.D. 700 ft.

JONES COUNTY

Jack Roberts' No. 2 Swann, 2,300 ft. from N and 1,600 ft. W of SE cor. of I. Milley Sur. ..... Drlg. 1,160 ft.

LOVING COUNTY

R. L. Allen's No. 1 fee, 4,290 ft. from NE line, 330 ft. from SE line, Sec. 32, H.&T.C. Sur. ..... Location.

R. L. Allen's No. 2 fee, 4,290 ft. from NE line, 990 ft. from SE line, Sec. 32, Blk. 32, H.&T.C. Sur. .... Location.

R. L. Allen's No. 3 fee, 4,290 ft. from NE line, 990 ft. from NW line, Sec. 32, Blk. 32, H.&T.C. Sur. .... Location.

R. L. Allen's No. 4 fee, 4,290 ft. from NE line, 330 ft. from NW line, Sec. 32, Blk. 32, H.&T.C. Sur. ..... Location.

Eppenauer Drlg. Co.'s No. 1-A Victor, 330 ft. from SW and 333 ft. from SE of NW of N half Sec. 4, Blk. 2, W.&N.W. Sur. ..... Rigged up.

Sinclair Prairie Oil Co.'s No. 1 Allen, 330 ft. from SE lines and 990 ft. from SW lines of Sec. 4, Blk. 2, W.&N.W. Sur. ..... Drlg. 2,150 ft.

Sinclair Prairie Oil Co.'s No. 2 Bell, 410 ft. from SE and 1,025 ft. from NE of Sec. 91, Blk. 1, W.&N.W. Sur. ..... Rig up.

Texas Pacific Coal & Oil Co.'s No. 1 Carmine, C of SE of SW of Sec. 40, Blk. 54, Twp. 1, T.&P. Sur. ..... Moving in material.

PECOS COUNTY

California Oil Co.'s No. 1 Reid, 1,087 ft. S and 498 ft. W from the NW cor. of Sec. 61, Blk. 1, I.&G.N. Sur. ..... Rigging up rotary.

California Oil Co.'s No. 23 Yates, 215 ft. W of No. 1 Reid, Sec. 34, Blk. 194, G.C.&S.F. Sur. ..... Drlg. 382 ft.

Culberson Bros.'s No. 15-B Monroe, 725 ft. from N line and 1,350 ft. from E line of Sec. 39, Blk. 194, G.C.&S.F.R.R. Sur. ..... Location.

Humble Oil & Refining Co.'s No. 1 White, Baker, 1,320 ft. from N and E lines of Sec. 44, Blk. Z, T.C. Sur.... Casing 7,240 ft.

Mid-Kansas Oil & Gas Co.'s No. 10 Smith, 150 ft. from N line and 350 ft. from E line of Sec. 31, Blk. 194, G.C.&S.F. Sur. ..... Preparing to cement; hole full of water; T.D. 625 ft.

Mid-Kansas O. & G. Co.'s No. 18 Smith-Taylor, 1,296 ft. from S line, 1,390 ft. from W line, Sec. 33, G. C.&S.F. Sur., Blk. 194 ..... Location.

Mid-Kansas Oil & Gas Co.'s No. 24 Smith-Taylor, 350 ft. W of S half of Turner Tract No. 1, Sec. 33, Blk. 194, G.C.&S.F. Sur. ..... Bldg. road.

Mid-Kansas Oil & Gas Co.'s No. 8 Fred Turner, Jr., 263 ft. from N and 55 ft. E of N half of Tract No. 1, Fred Turner Sur. ..... Location.

Mid-Kansas Oil & Gas Co.'s No. 25 Smith-Taylor, 344 ft. W of SE cor. of S half of Turner Tract No. 1, Sec. 33 ..... Location.

Mid-Kansas Oil & Gas Co.'s No. 26 Smith-Taylor, 395 ft. S and 344 ft. E of SE cor. of S half of Tract No. 1 ..... Location.

Mid-Kansas Oil & Gas Co.'s No. 1 Turner, 1,212 ft. from N line and 250 ft. from W line of Turner Sur. No. 3.. Show of oil 1,300 ft.; prepare to rig up rotary; T.D. 1,395 ft.

Mid-Kansas Oil & Gas Co.'s No. 1 Turner, 250 ft. from N line and 250 ft. from W line of Turner Sur. No. 3.. Cellar.

Mid-Kansas Oil & Gas Co.'s No. 3 Turner, 739 ft. from N and 209 ft. from W line of Turner Sur. No. 4 .... Bldg. road.

Mid-Kansas Oil & Gas Co.'s No. 5 Fred Turner, 525 ft. from S line and 500 ft. from W line of Tract No. 2.. Drlg. 360 ft.

Mid-Kansas Oil & Gas Co.'s No. 6 Fred Turner, 250 ft. from W line and 625 ft. from S line of Tract No. 1.. Drlg. 636 ft.

Mid-Kansas Oil & Gas Co.'s No. 7 Turner, 395 ft. from S line and 344 ft. from E line of Tract No. 1 ..... S.D. 1,225 ft.

Mid-Kansas Oil & Gas Co.'s No. 8 Fred Turner, 204 ft. S and 55 ft. W of the most northerly NW cor. of I. G. Yates Sur. A-8,195, but in Fred Turner, Jr., Survey, Tract No. 1 ..... Cellar.

Mid-Kansas Oil & Gas Co.'s No. 12-H Yates, 408 ft. S of N line of Sec. 33 and 344 ft. W of SE cor. of S half of Tract No. 1 ..... Location.

Mid-Kansas Oil & Gas Co.'s No. 13-H Yates, 408 ft. S of N line of Sec. 33 and 344 ft. E of SE cor. of S half of Tract No. 1 ..... Location.

Mid-Kansas Oil & Gas Co.'s No. 36-A Yates, 250 ft. N and 324 ft. W from the NW cor. of Turner Tract No. 3 in Sec. 34½, I.G. Yates Sur. ..... Clearing location.

Mid-Kansas Oil & Gas Co.'s No. 37-A Yates, 250 ft. N and 221 ft. E of NW cor. of the Turner Tract No. 3 in Sec. 34½, I. G. Yates Sur. ..... Testing 1,702 ft.

Mid-Kansas Oil & Gas Co.'s No. 38-A Yates, 250 ft. E and 205 ft. S from the NE cor. of Turner Tract No. 3 in Sec. 34½, I. G. Yates Sur. ..... Location.

Mid-Kansas Oil & Gas Co.'s No. 39-A Yates, 150 ft. N and 250 ft. W of the NW cor. of Turner Tract No. 4 in Sec. 34½, I. G. Yates Sur. ..... Location.

Mid-Kansas Oil & Gas Co.'s No. 40-A Yates, 344 ft. from E line and 395 ft. from N of SE cor. of S half of Turner Tract No. 1 ..... Preparing to spud.

Mid-Kansas Oil & Gas Co.'s No. 41 I. G. Yates, 480 ft. W and 204 ft. S of the most northerly NE cor. of I. G. Yates Sur. A-8,195 ..... Drlg. 695 ft.

Mid-Kansas Oil & Gas Co.'s No. 42 I. G. Yates, 204 ft. S and 55 ft. E of the most northerly NW cor. of I. G. Yates Sur. A-8,195 ..... Clearing location.

REAGAN COUNTY

Big Lake Oil Co.'s No. 14-C University, 725 ft. from S line and 2,730 ft. from E line of Sec. 35, Blk. 9, University Land Sur. ..... Drlg. 6,464 ft.

Big Lake Oil Co.'s No. 15-C University, 660 ft. from E line and 660 ft. from S line of Sec. 35, Blk. 9, University Land Sur. ..... Rig up.

Group No. 1 Oil Corp.'s No. 9-B University, 1,980 ft. from S line, 1,805 ft. W of E line of Sec. 39, Blk. 9, University Land Sur. ..... Tested 66 bbls. of water and 9 bbls. of oil per hour on 4-hour test; T.D. 8,850 ft.

Group Oil Co.'s No. 10-B University, 1,980 ft. from N and 1,805 ft. from E line, Sec. 36, Blk. 9 ..... Cellar.

Snyder et al's No. 1 Hughes, 1,320 ft. from N and W lines of Sec. 14, G.C.&S.F. Sur. ..... Drlg. 1,350 ft.

REEVES COUNTY

Hugo Freels et al's No. 1 Greenman, 330 ft. from NE and 2,310 ft. from SE, Sec. 21, Blk. 2, H.&G.N. Sur... Bailed 27 bailers of water with 600 ft. of oil in hole; T.D. 3,985 ft.

RUNNELS COUNTY

Agnew et al's No. 1 H. B. Fowler, 150 ft. S and W of NE cor. of Sec. 23, N. Travis Sur. No. 533 ..... T.D. 2,535 ft.; flowed 672 bbls. in 24 hrs.

Golden Pet. Co.'s No. 2 McMillan, Subdv. 22, N. Travis Sur. ..... Drlg. 2,476 ft.

B. C. Mann et al's No. 1 H. E. Wade, 150 ft. from S and 1,650 ft. from W line, Subdv. No. 8, Norvel Travis Sur. No. 533 ..... T.D. 2,540 ft.

Mann et al's No. 1 Wade, 330 ft. from N and 330 ft. from E of NW cor. of E 75 acres of S 308.6 acres, Blk. 10, N. Travis Sur. ..... T.D. 2,539 ft.; T.P. 2,537 ft.; 25 bbls. per hr.

F. D. Williams' No. 1 J. L. Elkins, 2,225 ft. from E and 1,300 ft. N of SW cor. of Blk. 12, but in Blk. 13, N. Travis Sur. No. 533 ..... Moving in material.

UPTON COUNTY

Gulf Prod. Co.'s No. 103 McElroy, 1,980 ft. from S and 660 ft. from W, Sec. 197, Blk. F, C.C.S.D.&R.G.N.G.... Drlg. 8,641 ft.

VAL VERDE COUNTY

South-Western Exploration Co.'s No. 1 E. K. Fawcett, 2,310 ft. from S and 2,310 ft. from E, Sec. 14, Blk. L, G.C.&S.F. Sur. ..... Moving in material.

WARD COUNTY

Abell Brothers' No. 1 Archenhold et al, 2,310 ft. from NE line and 330 ft. from SE line of Sec. 33, H.&T.C Sur., Blk. 5 ..... Flowing 149 bbls. per day; T.D. 3,045 ft.

Atlantic Oil & Prod. Co.'s No. 9 Johnson, 330 ft. from NE line and 990 ft. from NW line of Sec. 9, Blk. 34, H.&T.C. Sur. ..... Drlg. plug; T.D. 2,358 ft.

Atlantic Oil & Prod. Co.'s No. 10 Johnson, 990 ft. from NE line and 330 ft. from NW line of Sec. 9, Blk. 34, H.&T.C. Sur. ..... Location.

Atlantic Oil & Prod. Co.'s No. 12 Johnson, 990 ft. from SE line and 990 ft. from NE line of Sec. 9, Blk. 34, H.&T.C. Sur. ..... Trying to kill gas; T.D. 2,355 ft.

Atlantic Oil & Prod. Co.'s No. 13 Johnson, 330 ft. from NE line and 330 ft. from SE line of Sec. 9, Blk. 34, H.&T.C. Sur. ..... Cellar.

Atlantic Oil & Prod. Co.'s No. 14 Johnson, 330 ft. from NE line and 2,310 ft. from NW line of Sec. 9, Blk. 34, H.&T.C. Sur. ..... Testing; T.D. 2,523 ft.

Atlantic Oil & Prod. Co.'s No. 15 Johnson, 330 ft. from SE line and 1,650 ft. from NE line of Sec. 9, Blk. 34, H.&T.C. Sur. ..... Location.

California Oil Co.'s No. 2 J. F. York, 2,983 ft. from SW and 1,650 ft. from NW cor. of Sec. 10, Blk. 34, H.&T.C. Sur. ..... Drlg. 2,416 ft.

California Oil Co.'s No. 3 York, 1,650 ft. from NW and 330 ft. from SW, Sec. 10, Blk. 34, H.&T.C. Sur. ..... Moving in rotary.

Eastland Oil Co.'s No. 2 Johnson, 1,980 ft. from SE line and 1,980 ft. from SW line of Sec. 34, Blk. 34, H.&T.C. Sur. ..... Rigging up rotary; T.D. 2,450 ft.

Gulf Prod. Co.'s No. 33 Hutchings, 990 ft. from N line and 330 ft. from W line of Sec. 4, Blk. F, G.&M.M. B.&A. Sur. ..... Drlg. 2,575 ft.

Gulf Prod. Co.'s No. 34 Hutchings, 1,649 ft. from N line and 440 ft. from W line of Sec. 7, Blk. O, G.&M.M. B.&A. Sur. ..... Drlg. 2,345 ft.

Gulf Prod. Co.'s No. 38 O'Brien, 990 ft. from S line and 990 ft. from E line of Sec. 16, Blk. F, G.&M.M. B.&A. Sur. ..... Drlg. 2,750 ft.

Gulf Prod. Co.'s No. 39 O'Brien, 990 ft. from N line and 990 ft. from E line of Sec. 17, Blk. F, G.&M.M. B.&A. Sur. ..... Waiting on cement to set; T.D. 2,555 ft.

Gulf Prod. Co.'s No. 40 O'Brien, 1,650 ft. from N line and 330 ft. from E line of Sec. 17, Blk. F, G.&M.M. B.&A. Sur. ..... Drlg. 1,430 ft.

Gulf Prod. Co.'s No. 41 O'Brien, 1,650 ft. from N and 990 ft. from E lines of Sec. 17, Blk. F, G.M.M.B.&A. Sur. ..... Cellar.

Humble Oil & Ref. Co.'s No. 1 University, 990 ft. from N line and 440 ft. from E line of Sec. 2, Blk. 16, University Sur. ..... Rigging up rotary; T.D. 2,375 ft.

Sinclair Prairie Oil Co.'s No. 4 Archenhold, 2,310 ft. from NW line and 2,310 ft. from SW line of Sec. 23, Blk. 5, H.&T.C. Sur. ..... Drlg. 2,450 ft.

W. B. Smith's No. 1 Wallis, 2,636 ft. from NE line and 167 ft. from SE line of Sec. 19, Blk. 34, H.&T.C. Sur... Location.

Sturm-Simms Oil Co.'s No. 1 Jones, 2,310 ft. from NE and 330 ft. from SE, Sec. 25, Blk. B-29, P.S.L. Sur.. Drlg. 2,803 ft.

S. A. Thompson's No. 5-A Johnson, 2,310 ft. from NW and 1,650 ft. from SW cor. of Sec. 9, Blk. 34, H.&T.C. Sur. ..... Rig up.

WINKLER COUNTY

Magnolia Pet. Co.'s No. 4 Scarborough, 1,650 ft. from N line and 330 ft. from W line of Sec. 1, Blk. 77, P.S.L. Sur. ..... Fishing; T.D. 2,650 ft.

Magnolia Petroleum Co.'s No. 2 Walton, 330 ft. from N and 330 ft. from E, Sec. 19, Blk. 74, C.S.L. Sur. ..... Rig up.

McCurdy & Easter's No. 1 Scarborough, 1,650 ft. from W and 2,310 ft. from S, Sec. 1, Blk. 77, P.S.L. Sur... Machine on ground.

Sid Richardson's No. 6-A Scarborough, 330 ft. from N and 990 ft. from W, Sec. 1, Blk. 77, P.S.L. Sur. ..... Location.

Sid Richardson's No. 5-A Scarborough, 330 ft. from W and 190 ft. from S, Sec. 1, Blk. 22-C, P.S.L. Sur. .... Location.

Sinclair Prairie Oil Co.'s No. 3 W. F. Scarborough, 1,650 ft. from E line and 990 ft. from N line of Sec. 1, Blk. 17, P.S.L. Sur. ..... Drlg. 2,725 ft.

Wildcat Operations in Texas Panhandle

Week Ending January 8

CARSON COUNTY

Company, well, farm name, section and block—	Remarks:
American Ref. Co.'s No. 11 Burnett, 745 ft. from E line, 802 ft. from S line, Sec. 115, Blk. 5, I.&G.N. Sur.	Location.
American Ref. Co.'s No. 12 Burnett, 1,145 ft. from E line, 802 ft. from S line, Sec. 115, Blk. 5, I.&G.N. Sur.	Location.
Huber Pet. Co.'s No. 1 Burnett, C SW Sec. 123, Blk. 5, I.&G.N. Sur.	Rig.
Reiger et al's No. 1 Foster, 330 ft. from N and E lines of SW Sec. 93, Blk. 7, I.&G.N.R.R. Sur.	Drlg. 2,655 ft.
Skelly Oil Co.'s No. 25 (West) Schaffer, 1,320 ft. from S line, 2,200 ft. from W line of Sec. 87, Blk. 4, I.&G.N. Sur.	Bldg. rig.
United Crude Oil Corp.'s No. 3 Cooper, 330 ft. from N line, 310 ft. from E line, SE Sec. 5, Blk. 9, I.&G.N. Sur.	Rig up.

DALLAM COUNTY

Eben Warner's No. 1 Jarboe, 1,530 ft. from S line, 415 ft. from W line, Sec. 2, Blk. 2, B.&B. Sur.	Rig up.

DEAF SMITH COUNTY

Western Union Oil Co.'s No. 1 Farwell, C NW cor. Sec. 18, Twp. 3n, Range 2e, Capital Lands Sur.	S.D. 1,575 ft.

GRAY COUNTY

Anderson & Bean's No. 2 J. C. Vollmert, 330 ft. from S line, 330 ft. from E line, SW Sec. 140, I.&G.N. Sur., Blk. 3	Cellar.
Cambrian Oil Co.'s No. 2 L. H. Webb, 990 ft. from N line, 330 ft. from E line of E½ NE Sec. 62, Blk. 25, H.&G.N. Sur.	Rig up.
Chism et al's No. 1 J. M. Carpenter, 330 ft. from N line, 330 ft. from E line of SE Sec. 37, H.&G.N. Sur., Blk. 25	S.D. 2,892 ft.; P.B. to shoot with 15 qts.; 2,650-62 ft.; C.O.
Dixon Creek Oil Co.'s No. 6 Archer, 330 ft. from E line, 330 ft. from S line of NW Sec. 139, Blk. 3, I.&G.N. Sur.	Rig up.
Dixon Creek Oil Co.'s No. 1 D. W. Cary, 2,600 ft. from N line, 1,157 ft. from W line of Sec. 114, Blk. 3, I.&G.N. Sur.	Rig.
Dyke Oil Co.'s No. 1 Saunders, NW cor. S½ NW Sec. 3, Blk. 1, B.S.&F. Sur.	Rig up.
Gulf Prod. Co.'s No. 5 Ellis Cockrell, 330 ft. from N and E lines, S½ Sec. 2, Blk. M-21, T.C.R.R. Sur.	Location.
Hendron et al's No. 1 Husselby, 330 ft. S and E, SW SW Sec. 11, Blk. A-9, H.&G.N. Sur.	Rig.
Mazda-Shell's No. 4 Coombs-Worley, 990 ft. from N line, 330 ft. from E line, Sec. 35, Blk. 3, I.&G.N. Sur..	Rig.
Mid-Kansas O. & G. Co.'s No. 4 Webb, 330 ft. from S and W lines of NE Sec. 61, Blk. 25, H.&G.N. Sur. ..	Rig up.
Skelly Oil Co.'s No. 1-B L. H. Webb, 745 ft. from E line, 540 ft. from S line of NE Sec. 43, H.&G.N. Sur., Blk. 25	Rig up.
Skelly Oil Co.'s No. 7 Vicars, 1,320 ft. from N line, 330 ft. from W line of E½ NW Sec. 127, Blk. 3, I.&G.N. Sur.	Rig up.
Skelly Oil Co.'s No. 4 Webb, 330 ft. from N line, 330 ft. from E line, Sec. 16, Blk. 25, H.&G.N. Sur.	Bldg. rig.
Sun Oil Co.'s No. 2-B Combs-Worley, 330 ft. from S line, 990 ft. from E line of SW of Sec. 34, I.&G. N. Sur., Blk. 3	Shut in 2,936 ft.; to test.
Texas Co.'s No. 11 Cook-Faulkner, 1,310 ft. from W line, 1,148 ft. from N line of W 172 acres of Sec. 39, Blk. 3-B, H.&G.N. Sur.	Drlg. 1,710 ft.
F. H. Yealy's No. 2 Crank, 960 ft. from N and E lines of N 160 acres of W 400 acres of Sec. 163, Blk. 3, I.&G.N.R.R. Sur.	Drlg. 3,030 ft.

HUTCHINSON COUNTY

Stanolind O. & G. Co.'s No. 2-C Ware, 330 ft. from S line, 330 ft. from E line, Sec. 20, Blk. M-21, T.C. R.R. Sur.	Rig up.

WHEELER COUNTY

H. R. Anderson's No. 1 R. L. Harlan, 330 ft. from N line, 330 ft. from E line of NW Sec. 49, H.&G.N. Sur., Blk. 24	Rig up.

Oklahoma Fields

(Continued from Page 40)

after having been acidized in dolomite at 4,140-93 feet, swabbed 1,200 bbls. of oil and no water. Then it flowed 3,117 bbls. of oil in 48 hours, with 310 bbls. of water.

In the West Holdenville district Magnolia Petroleum Co. completed No. 1 Witty, SE NW SW Section 22-7-8. It pumped 129 bbls. in 24 hours from Calvin sand at 1,156-74 feet.

Vivian Oil Co.'s No. 2 Lucas, NE NW NW Section 2-6-4, was completed. It swabbed 1,506 bbls. in 48 hours after an acid treatment in dolomite at 4,218-58 feet.

Gypsy Oil Co. completed No. 1 Quis, CSL N half NW Section 25-6-4, which swabbed 1,080 bbls. in 24 hours.

Amerada Petroleum Corp.'s No. 1 Zoller, NE SW Section 5-6-5, swabbed 628 bbls. of oil and 2,000 bbls. of water from dolomite at 4,184-4,218 feet.

Carter Oil Co. and others made a location for No. 1 Larney, C N half NW NW Section 1-10-6. Phillips Petroleum Co. will deepen to the Hunton lime No. 1 Walker, SE cor. Section 29-8-8, old total depth 3,128 feet. Sayre and others were drilling at 700 feet in No. 1 Green, SW SE NW Section 15-7-4. Limestone Oil & Gas Co. was drilling at 500 feet in No. 9 Walker, NW SE NE Section 15-7-8. Tilley and others have a machine in for No. 3 Walker, C NE NE NW Section 22-7-8, Stanolind Oil & Gas Co., Amerada Petroleum Corp. and Indian Territory Illuminating Oil Co. have made a location for No. 2 Palmer, SW NW NW Section 36-6-7.

Creek County

In Creek County, Pure Oil Co. and Johnson Oil & Refining Co.'s No. 3 Brightsman, SW SE NE Section 30-19-10, was shot with 210 quarts of explosive in Red Fork sand at 2,204-37 feet and swabbed and flowed 106 bbls. in 24 hours.

J. A. Hull completed No. 1 Deer, SE SW NW Section 22-18-8, Olive Pool. It swabbed 50 bbls. in 24 hours.

Doke & Hughes' No. 2 Rentie, NE SW SE Section 34-18-8, was shot in Layton sand at 1,295-1,329 feet and is estimated as a 100-bbl. well.

Jones & Doss' No. 6 Tiger, CWL NW NE Section 34-18-8, which was dry in Layton sand at 1,281-1,310 feet had a hole full of water at 1,500 feet. No. 7 Tiger, CNL NW NE Section 34, was shot at 1,280-1,307 feet and the hole filled 700 feet with oil. Smith and others completed a 5-bbl. well in No. 5 Fry, a twin, SW NW SE Section 14-17-8, in Layton sand at 1,317-52 feet.

Devonian Oil Co.'s No. 5 Big Pond, NE NW NE Section 36-15-7, southwest of Depew found Wilcox sand at 3,769-96 feet and swabbed 122 bbls. in eight hours. Olean Petroleum Co.'s No. 6 Brush, NW NE NE Section 36-15-7, swabbed 150 bbls. in eight hours from Wilcox sand at 3,771-92 feet.

Gled Oil Co. has machine in for No. 5 Escoe, SW SE SE Section 27-18-8. F. O. Akin was drilling at 160 feet in No. 1 Scruggs, SE SW NE Section 32-18-8. C. C. Taylor and others have machine in to drill No. 1 Colbert, 1,120 feet south and 860 feet west of C Section 31-18-11. Mead Oil Co. has a rig on the ground for No. 2 Taylor, NW cor. Section 2-17-8. Curtis Oil Co. has a machine in for No. 1 Francis, C SE NE Section 6-17-10. Hartman and others moved in machine for No. 1 Harwell, NE SW NW Section 36-17-11. Ed Smith and others' No. 1-A Renfrow, NE SE NE Section 9-16-9, is a machine.

Osage County

J. H. Dewor's No. 1-A, SW cor. Section 29-28-11, Osage County, swabbed 50 bbls. in 24 hours, after a shot in Peru sand at 1,285-1,325 feet.

Sinclair Prairie Oil Co. and Mead Oil Co.'s No. 1, NE cor. SW Section 10-25-6, in the Fairfax district which found Bartlesville sand at 2,807 feet, drilled to 2,833 feet and flowed 540 bbls. in 24 hours. It was drilled to 2,835 feet and flowed 597 bbls. in 24 hours, 537 bbls. on the following day and 567 bbls. on the third day. It will be drilled deeper and shot.

Skelly Oil Co.'s No. 1, NE cor. NW Section 28-24-7, found Bartlesville pay at 2,867-68 feet and shot it. The well swabbed 18 bbls. in 15 hours.

F. M. Penney completed No. 4, SW cor. SE Section 15-24-8. It pumped 50 bbls. in 24 hours from Burgess sand at 2,321-63 feet, which was shot.

Gypsy Oil Co. and Norbla Oil Co. were building rig for No. 1, SE NW Section 3-26-6. A. H. Kasishke, Inc., has cellar dug for No. 2, NE cor. SW Section 10-25-6. Champlin Refining Co. was drilling No. 5, NW cor. SE Section 16-24-7, at 440 feet, and spudding No. 6, NE NW SE same section, and was spudding No. 5, CEL NW SE Section 24-24-7. The same company's No. 4, NW NE Section 24-24-7, was dry and abandoned at 738 feet. Producers & Refiners Corp. and Peters Petroleum Corp. were drilling at 611 feet in No. 6, SW SE NE Section 24-24-7. Gray & Tolson made a location for No. 4, NE SE SW Section 27-21-9.

Noble County

Lucien Consolidated Oil Corp. completed No. 2 Weber, C NE NW Section 20-20-2w, in the Lucien Field, Noble County. It made 499 bbls. in 12 hours in a potential test.

Skelly Oil Co. was building rig for No. 1 Long, C NW NW Section 21-20-2w. Magnolia Petroleum Co. was rigging up rotary for No. 1 O. T. Long, C SW SE Section 20-20-2w. Minnehoma Oil Co. had cellar dug for No. 2 Schonwald, C SE NE Section 20-20-2w.

Pawnee County

S. Martin completed No. 8-A Colton, CEL SW Section 6-20-8, Pawnee County. It is a 50-bbl. well at a total depth of 2,677 feet.

L. H. Wentz' No. 2 Williams, C NW NE Section 31-19-4w, Logan County, drilled deeper from 6,180 feet, found the School Land sand at 6,131-54 feet. A sand at 6,525-50 feet had only a showing of oil and gas, but water that filled the hole. The test was abandoned.

Mid-Continent Petroleum Corp.'s No. 2 Williams, NW NE Section 19-19-2, Payne County, a wildcat, had Misener sand at 4,544 feet and drilled to 4,552 feet and was rigging up standard tools to drill deeper. Eight-inch casing was set at 4,527 feet.

Stencil Oil & Gas Co. was building rig for No. 1 Chunn, SE cor. NW Section 29-4-14e, Pittsburg County.

Pontotoc County

In the Fitts Pool, Pontotoc County, named in honor of John Fitts, geologist of Ada, who is credited with knowing more about the geology of Pontotoc County than most men. W. A. Delany's No. 1 Hardin, NW cor. Section 30-2-7, had Hunton lime at 3,680 feet and Sylvan shale at 3,960-68 feet. The well flowed 200 bbls. in 24 hours. It was shut in awaiting the installation of a separator.

T. E. Revells and others' No. 1 Wolfe, a wildcat in the NE cor. Section 18-1n-2e, Murray County, topped Hunton lime at 1,800 feet and Sylvan shale at 1,873 feet. Sand at 2,080-90 feet, believed by some to be Wilcox, developed a hole full of water. The 8-inch pipe was frozen at 2,060 feet, total depth 2,090 feet.

Southern Oklahoma Fields

George Pace and others made a location for a wildcat, No. 1 Siever, SE cor. SW Section 4-1n-7w. It will be a 3,500-foot test.

Mitchell & Kilbourne have machine in for No. 1 Burge, NE SE SE Section 25-7s-5e, Marshall County. Abe Wallack was drilling at 30 feet in No. 3 McDuffie, SE NE SW Section 3-7s-6e.

Schermerhorn-Ardmore's No. 3 Smith, SE SW SW Section 4-4s-3w, Carter County, is a 5-bbl. completion at 803-95 feet.

Cotton Belt Oil Co. has rig up for No. 12 Rexroat C, NE NW NW SW Section 10-4s-2w.

Mac-Co Oil Co. was rigging up rotary for No. 1 Butler, SW NW SE Section 36-2s-7w, Stephens County.

Mudge Oil Co.'s No. 13 Cobb, C W half NE NE Section 1-2s-5w, Stephens County, is a 2-bbl. completion at 694-747 feet.

Skelly Oil Co. completed a 240-bbl. well in No. 1 B. Drew, C NW SW SE Section 8-2s-2w, from broken sands from 1,715 feet down to 2,702 feet.

Carter Oil Co.'s No. 2 William Perkins, C NE SE SE Section 4-1s-3w, made 3,000,000 feet of gas and 15 bbls. of oil from broken lime and shale at 2,645-2,821 feet. It will be tested through tubing.

Tulsa and Wagoner Counties

In the Tulsa Wagoner County district Sands Petroleum Co.'s No. 1 Norfer, C SW NW NE Section 23-18-15, east of Broken Arrow, is a 3.000,0 0-foot gasser in Wilcox sand at 1,512-24 feet.

In the Bixby district, Tulsa County, H. W. Bowder and others are drilling below 300 feet in No. 1 Perryman, NE NW NE SW Section 5-17-14, and drilling below 450 feet in No. 2 Perryman, SW SE NE SW Section 5-17-14. Rachael Oil Co. had a 20-bbl. showing in Dutcher sand at 1,495-1,514 feet in No. 1 Kernal, NW SE NW Section 8-17-14. L. B. Jackson found Dutcher sand dry in No. 1 Perryman, SE SW SW Section 5-17-14, at 1,436-40 feet. It was being delayed by a fishing job.

Okmulgee and Muskogee Counties

Sheridan Oil Co.'s No. 5 Peters, SW SE SE Section 33-16-11, Mounds district, was shot at 1,988-2,033 feet and swabbed 50 bbls. in 24 hours.

Beal & Berryhill were drilling No. 1 Johnson, SW SE SE Section 26-15-11. J. McComis was drilling at 300 feet in No. 1 Bruner, NE SW SW SW Section 14-15-17, Muskogee County. H. G. Hazlett was drilling at 150 feet in No. 1 Dunbar, C NW SW Section 30-14-13. Francis Oil Co. was drilling at 950 feet in No. 1-A Ashley, NE SW SE Section 29-14-14. Gled Oil Co.'s No. 1-A Manuel, NW cor. SE Section 22-13-14, was drilling at 1,850 feet.

IMPORTANT BOOKS
for the Oil Man's Library

"GENERAL ENGINEERING HANDBOOK"

Operating under the NRA has created more leisure time for many employes in the petroleum industry. What to do with this time is a problem still unsolved by many. It has been suggested that this time can be put to good advantage by studying, but many men do not have any definite ideas of what particular type of study course to undertake.

Nearly everyone has some interest in engineering, because it is applied to so many of the things that enter into our daily life. For those people, and for the engineer who desires a handy reference book, "General Engineering Handbook," edited by Charles Edward O'Rourke, assistant professor of structural engineering, Cornell University, and a staff of 29 specialists, is recommended.

This book contains 30 sections dealing with such subjects as mathematics, engineering materials, hydraulics, foundations, water supply, steam power plant equipment, pumps and compressors, electricity and magnetism, welding, and steel and timber structures. Each section is written by a recognized specialist in the subject and is therefore a ready reference to fundamental data, specific methods, and essential formulas dealing with these particular subjects.

The book can be used as a textbook. It contains short, selected bibliographies of reference books on the various subjects treated in the 30 chapters, so that anyone who desires to go into these departments of engineering more thoroughly can do so by securing the advanced textbooks. It is a very handy book to direct anyone interested in a course of home study. With so much unused time now available to the average employe, it seems to offer a good opportunity to turn this time to excellent advantage.

In addition to this general purpose the book is of great interest and value to engineers who desire in one volume brief summaries of formulas and other data upon various engineering problems. It contains 857 pages and is divided into four sections: General, civil, mechanical and electrical engineering. It is well illustrated and printed upon thin paper, is 5 by 7¾ inches in size, and has flexible binding.

"General Engineering Handbook" may be purchased through the Book Department of The Oil and Gas Journal at the regular postpaid price of $4. Check or money order for this sum must be received before the book can be mailed.

T. J. Donoghue Expects Pronounced Improvement

By T. J. DONOGHUE

Vice President of The Texas Co.

The oil industry during the first half of 1933 was in a very bad way due to large production of illegitimate oil, particularly in the East Texas Field. The best minds in the industry were striving to find a solution of the problem which was exaggerated by the willful conduct of a very small minority in evading orders of the State Railroad Commission and taking advantage of neighboring producers who were complying with rules and regulations of the commission.

The state authorities, however, with the assistance of the Federal Government, have reduced the production of illegal oil to a minimum, which has resulted in the industry securing a better price for its products. While the results for the whole year of 1933 will be far from satisfactory they will make a much better showing than if conditions that applied during the first half of the year had continued for the 12 months.

We are in hopes that the efforts of Secretary Ickes, the Planning and Coordination Committee, the operation of the code, and the activities of the state authorities, will result in stabilizing conditions and 1934 will show a pronounced improvement that will inure to the benefit of the public and to the industry.

TEXAS PETROLEUM COUNCIL

AUSTIN, Tex., Jan. 8.—The semi-annual meeting of the directors of the Texas Petroleum Council has been called for January 15 at Houston, it was announced here by Allan Peden, executive secretary.

The organization has deferred nomination of a president, pending decision of Prof. A. W. Walker whether he will return to Texas next month or continue as counsel for the Federal Petroleum Administration. He had tendered his resignation as council president when he assumed his Federal duties.

Wildcat in Western Starr County Making Heads; Deep Test in Central Wilson County Dry

By B. D. STEVENSON
Staff Correspondent, Southwest Texas Fields

SAN ANTONIO, Tex., Jan. 8.—Great Plains Oil Co.'s No. 1 Sanchez, a wildcat in western Starr County was shut down over the holidays and early the past week was discovered making heads and had raised the drill stem out of the hole a little. Last reports was it was making two-minute heads at intervals of six hours. Total depth is 3,865 feet. It stood for five months at about 2,400 feet and had passed one sand showing considerable gas at 406-13 feet and another at 879-87 feet. It resumed drilling the first of December.

The test was first announced as Jim Cloud, Inc.'s No. 1 Sanchez, and is in Survey No. 344 about 12 miles north of Roma and about 12 miles south of the Cuevitas Pool in the northwestern corner of the county. Cloud took the block originally and made the deal with the Great Plains to drill the well. It stood at about 2,400 feet for five months waiting for water and is on one of two blocks Cloud took with a 4,500-foot hole to be drilled on each.

It is, of course, possible the gas pressure has broken through from one of the shallow sands that was tested when they were reached but did not make commercial proportions. The last reports indicated the operators would set casing at around 2,500 feet to shut off everything down to the depth at which the hole recently resumed drilling, and then make a test.

Hidalgo County

One other test in the lower Rio Grande Valley was being watched over the week-end, Chancellor & Hall's No. 1 Garcia, in the southwest corner of Hidalgo County, with casing set at around 3,170 feet. It was carried to 3,187 feet some months ago and other operators finally took the proposition over after it had stood for a considerable time, Weekly and McGinley being the principal new interests. They sidetracked and went down to the sand in a new hole, set casing and drilled out the cement last week and were to test over the week-end. A month has elapsed since casing was set during which time there has been considerable lease buying around the proposition and quite a number are anticipating a good oil well.

In Jim Wells County, Trinity Drillers early this week was expected to get a test in No. 1 Seeligson, a mile west of Magnolia Petroleum Co.'s No. 2 Seeligson, an oil well, and the first test drilled in the district since Magnolia completed its No. 2. Trinity Drillers' test got a number of sands of good thickness and with some showings of oil in some of them but drill stem tests failed to develop anything and after reaching a total depth of 4,032 feet they plugged off all the lower sands and have set casing over a sand at 2,365 feet. Magnolia's No. 2 Seeligson is producing from a sand at 3,250 feet.

Deep Edwards Tests

Humble Oil & Refining Co. abandoned No. 1 Houston in central Wilson County at 4,933 feet in Austin chalk and dry. It topped the chalk at 4,847 feet which is generally agreed to be pretty low and while it was intended for an Edwards lime test it stopped short of that due to the low log. There was some Serpentine in No. 1 Hardy, a mile or more northeast, which Humble drilled to the Edwards lime at 5,118 feet but when No. 1 Houston went into chalk without finding Serpentine it eliminated that chance.

This is one of two deep tests that have been drilling in the Balcones fault zone, the other being Amerada Petroleum Corp.'s No. 1 Doerring, in southwestern Frio County, which for a month has been delayed with a fishing job at 6,064 feet and has cemented off the tools lost in the hole and set casing past them and now ready again to start drilling.

Starr County

Mims and others' (carried by some as Sam Evans) No. 1 Guerra, 2 miles northwest of the Cuevitas Pool in northwestern Starr County, has been abandoned at 2,500 feet after getting salt water in a sand at 2,318-28 feet which seems to correlate with the producing sand of the Cuevitas Pool. Navarro Oil Co.'s No. 1 Trevino, 10 miles northwest of the Cuevitas Pool and in Jim Hogg County, has been abandoned at 3,060 feet which eliminates all the wildcats around the Cuevitas Pool, Sun Oil Co. this week is completing two tests in the pool.

Duval County

Sun Oil Co. completed three wells in northern Duval County the past week resulting in extensions. No. 18 Weiderkehr, in Survey No. 361, is a 660-foot south extension of the Northwest Extension Pool and it came in in sand at 2,-211-25 feet for 15,000,000 feet of gas and 50 bbls. of oil daily. The gas may indicate limitations to the field which has been going straight south. No. 18 may indicate it will take a swing in another direction.

The other two were Nos. 16 and 17 Weiderkehr, in Survey No. 359, each of which is 660 feet west of production in the North Government Wells Pool and that much of an extension. Each came in for 9 bbls. hourly. No. 16 came in at 2,325 feet and No. 17 at 2,320 feet. Sun Oil Co. has made locations for Nos. 20 and 21 Weiderkehr, 660 feet west of Nos. 16 and 17 and in the direction of the Extension Pool.

On the north end of the North Government Wells Pool, Magnolia which is the only operator that can extend the pool in that direction, has made locations for Nos. 14 and 15 Duval County Ranch Co., 660 feet north of production, and will start the third row of tests in Survey 208.

Nueces County

In Garland Clymore's No. 1 Ollie Purl, in western Nueces, a 4,800-foot test just east of the 2,000-foot Agua Dulce gas field, it is estimated that around 100 bbls. of gasoline daily can be recovered. It got the sand at 4,844-58 feet and is a west offset to Houston Oil Co.'s No. 1 Ollie Purl, a similar producer in sand topped at 4,823 feet.

Live Oak Core Test

Henderson Coquat is making a core test of his No. 1 Burgess in western Live Oak County, 9 miles west of the town of George West. It is being cored from top to bottom and contracted to go to the Pettus sand. Cole sand is expected at around 1,800 feet and will be the first possibility and late last week No. 1 Burgess was down 1,400 feet.

Wildcat Operations in Southwest Texas

Week Ending January 6

BASTROP COUNTY

Company, well, farm name, section and block—	Remarks:
Sun Oil Co.'s No. 1 Page-Probst, 330 ft. from E line, 330 ft. from S line of 103-ac. tract in Andrew Mays Sur.	Moving in rig.

BELL COUNTY

Gus Winston et al's No. 2 Warrick, 100 ft. N of James Scroggins' No. 1 Warrick, in Elijah Ingram Sur.	T.D. 2,000 ft.; fishing.

BEXAR COUNTY

C. L. Albertson's No. 2 C. Hoke estate, 675 ft. from E line, 250 ft. N of Medina River in Jose Maria Barrera Sur.	T.D. 1,134 ft.; bailing.
A. M. Blume's No. 2 Louis Ridder, approximately 2,-350 ft. N of R.R., and 700 ft. E of W line of J. M. Baerera Sur. No. 58	T.D. 680 ft.; drlg.
Cosby et al's No. 1 Ruiz, SE cor. of 82-ac. tract in F. Rowland Sur. No. 48	T.D. 819 ft.; standing.
S. W. Forrester's No. 1 Appelt, 160 ft. E of Corpus Christi Road, 1,666 ft. S of N line of tract in M. Urregias Sur.	T.D. 840 ft.; drlg. shale.
Thos. Gorton's No. 1 Edward Jackel, 600 ft. from N line, 800 ft. from E line of tract in J. Ward Sur.	T.D. 80 ft.; standing.
S. J. Moore's No. 1 T. W. Masterson, 150 ft. from S and W lines of tract in M. Cartari Sur.	T.D. 200 ft.; drlg.
George L. O'Neill's No. 1 Neimann in Juan Montes Sur. No. 6	T.D. 974 ft.; S.D.
J. W. Johnson's No. 1 Willow Springs, 150 ft. from N and W lines of lease in B. Munoz Sur. No. 151	T.D. 2,021 ft.; P.B. and bailing.
N. H. Price's No. 1 Barragas, 150 ft. from S and E lines of 60-ac. tract	T.D. 419 ft.; S.D.
Fred A. Perrenot's No. 1 Russell, 750 varas from NE line, 54 varas from NW line of 500-ac. tract in Rodriquez Sur.	T.D. 1,315 ft.; standing.
C. A. Smith's No. 1 Henry Lamb, 750 ft. from N and E lines of Lamb farm, in de la Garza grant	T.D. 730 ft.; drlg.
F. E. Tegler's No. 1 Brackenridge, 578 ft. from S line, 2,284 ft. from W line of tract in Maria Gertrudis de Alanis Sur.	T.D. 1,320 ft.; T.A.
W. L. Umburn's No. 1 Otto Jackel, 150 ft. from S and E lines of Jackel 391-ac. tract in Samuel McCulloch Sur. No. 54	T.D. 890 ft.; pulling csg.

BLANCO COUNTY

Blanco Development Co.'s (McGee) No. 1 A. J. Dittmar, 1,320 ft. from S line, 150 ft. from W line of George Evans Sur. No. 53, 4 miles NW of Johnson City	T.D. 1,210 ft.; trying to shut out wtr.

COMAL COUNTY

Theo. Hicks et al's No. 1 Gruene, 435 ft. from NE line, 414 ft. from NW line of H. Foster Sur. No. 34, 3 mi. NE from New Braunfels	Spudding.

DE WITT COUNTY

Bunte, Inc.'s No. 1 Hilgartner, 330 ft. out of SE cor. of W 200 acres of Hilgartner's 415-ac. tract in Caleb Wilburn Sur.	T.D. 3,798 ft.; drlg.

DUVAL COUNTY

Eaton et al's No. 1 Herbst, 1,650 ft. from E line, 330 ft. from S line in S.A.&M.G. Sur. No. 71	T.D. 2,080 ft.; drlg.
O. W. Killam's No. 3-A Wood-Welder, 100 ft. N of No. 3, 6,223 ft. from S line and 200 ft. from W line of Sur. No. 102	T.D. 1,350 ft.; losing returns at 627 ft.
W. A. Smith's No. 1 Holzapfel, west central part of lease, 900 ft. W of NE cor. of Sur. 344 and 169 ft. from N line of Sur. No. 42	T.D. 2,208 ft.; drlg.
Shasta Oil Co.'s No. 1 Well, 1,250 ft. from NE line, 1,250 ft. from NW line of Sur. No. 566	T.D. 2,400 ft.; drlg.

(Continued on Page 77)

Oil Show at Houston to Have New Features

The present plans of the Oil Equipment and Engineering Exposition to be held in the Convention Hall at Houston, Tex., April 16-21, aim to make the second oil show in that city outstanding from an educational and engineering standpoint. All branches of the petroleum industry will be covered by special features as well as by equipment for drilling, production, refining, pipe lines, gas plants and marketing. The development of equipment design and the application of engineering princples to operation will be stressed in the section of free exhibits giving such institutions as the U. S. Bureau of Mines, American Petroleum Institute, National Safety Council, universities specializing on petroleum engineering, etc., an opportunity to present the results of research and experimental work in the center of present-day oil activity.

Another interesting section will be devoted to display of new inventions, under the direction of Lester B. Clark, of Houston, who will make it a clearing house for both manufacturers interested in new patents and inventors desirous of showing their inventions to manufacturers. The space for new inventions and patents will be free but the products must be absolutely new and never yet manufactured.

Complimentary tickets will be furnished to all exhibitors in an unlimited amount, but with the request that these tickets be given only to oil men so that time and literature will not be wasted.

Demonstration of tools and machinery can be done by exhibitors on the large outside space adjacent to Convention Hall, aiding the visitors in seeing equipment in actual operation so that they can study the performance of the tools and machinery as well as their construction.

Visitors will be in attendance from all sections of the United States, and, from information secured by E. G. Lenzner, general manager of the Oil Equipment and Engineering Exposition, many representatives of foreign oil companies will take advantage of the opportunities offered by the oil show to study American made tools and machinery.

Big Gas Well in Rush County and Average Wells in Flush Pools in Kansas; Production Is Up

By JAMES McINTYRE

Production in Kansas in the past week averaged 113,340 bbls. per day, an increase of 3,485 bbls. per day compared with the production of the previous week. It was a somewhat quiet week in the field, with not much new work started.

Schermerhorn Oil & Gas Co. completed a 38,000,000-foot gas well in Rush County, western Kansas. Rice, McPherson and Harvey County operators reported the completion, or near completion, of a number of wells which might be said to have been below the average in production for wells in those fields. In Sedgwick County operators plugging back old deep sand oil wells to higher sands were unsuccessful in bringing in new production. In Greenwood County the week's results were unsatisfactory with three dry holes and a small oil well as the best that could be offered. A 700-bbl. well was completed in the Cunningham Pool in Kingman County.

Production by Pools

Estimated daily average production of important pools in Kansas for the week ending January 6 and for the preceding week was as follows:

Field or pool—	Jan. 6	Dec. 30
Hollow	10,115	9,185
Ritz-Canton	13,120	12,875
Voshell	8,655	8,595
Sedgwick County	4,405	4,350
Nikkell	4,015	3,833
Ellsworth	4,772	3,573
Barton County	312	554
Rice County	8,788	7,825
Reno County	2,250	2,248
Ellis County	184	138
Kingman County	917	1,494
Stafford County	515	462
Russell County	5,320	3,568
Greenwood County	12,000	12,000
Butler County	18,000	17,000
Other pools	19,972	22,155
Total	113,340	109,855

Reno and Harvey Counties

In eastern Reno County Manning & Terry and others' No. 1 Dick, SE SW Section 36-22-4w, on Sinclair Prairie acreage, flowed 425 bbls. in 14½ hours from pay at 3,314-19 feet. It may be deepened.

In the Hollow Pool in Harvey County the Texas Co.'s No. 3 Androes, NW cor. SW Section 8-22-3w, was acidized in Wilcox sand at 3,605-18 feet, and later pumped 75 bbls. in 24 hours.

Sinclair Prairie Oil Co. completed No. 4 Neufeldt, NE SE NE Section 18-22-3w, which pumped 390 bbls. in 24 hours from Hunton lime at 3,407-44 feet.

The following new work was started in Harvey County: Shell Petroleum Corp.'s No. 3 Voth, NE SE NW Section 4-22-3w, cellar; Derby Oil Co.'s No. 1 Sperling, 330 feet south and 125 feet east of C Section 17-22-3w, rigging up; Sinclair Prairie Oil Co.'s No. 5 Ediger, SW SE SW Section 19-22-3w, spudding; Mid-Kansas Oil & Gas Co.'s No. 3 Klassen, NW NE NW Section 30-22-3w, set 15-inch pipe at 441 feet.

McPherson County

Slick, Pryor & Lockhart's No. 1 Grattan, C NE NW NW Section 34-20-3w, an old well deepened from 3,500 feet, was shot at 3,499-3,512 feet but was dry and was abandoned.

Roth & Faurot's No. 1 Almen, NE NW SE Section 13-19-3w, was completed. It made a potential flow of 309 bbls. in 24 hours.

Whan and others' No. 1 Dixon, NW cor. SW Section 7-19-2w, deepened from 3,059 feet to 3,094 feet, produced 10 bbls. in 24 hours. It was completed.

Dickey Oil Co. abandoned the locations for Nos. 3 and 4 Williams, SE NE NW and NE SE NW Section 26-19-2w.

Youker and others' No. 7 Eaton, NW NE NE Section 26-19-2w, was acidized in Viola lime at 3,395-3,423 feet and pumped 150 bbls. in eight and one-half hours.

Breslin and others' No. 2 Flock, SE NE NW Section 35-19-2w, pumped 30 bbls. of oil and 5 bbls. of water in five hours from chat at 2,907-54 feet.

Darby Petroleum Co.'s No. 2 Doane, SW cor. NW Section 28-19-1w, had Viola lime at 3,432-36 feet. It was treated with 1,000 gallons of acid but failed to produce and is shut down for orders.

New work in the county included McBride, Inc.'s No. 3 Griffin, SE SW Section 14-19-2w, drilling at 390 feet. Apex Oil Co.'s No. 3 Knudson, NE NW Section 23-19-2w, spudding; Helmerich & Payne's No. 2 B. H. Russell, SW SE NE Section 23-19-2w, rigging up; Lario Oil & Gas Co. and others' No. 4 Hill, NW NE SE Section 23-19-2w, cellar; Lario Oil & Gas Co. and others' No. 5 Boal, NW NE NW Section 24-19-2w, set 15-inch pipe at 132 feet; Imo Oil & Gas Co.'s No. 1-A Sadey, NW cor. SW Section 18-19-1w, drilling at 450 feet.

Rush County

Schermerhorn Oil & Gas Co. has a 38,000,000-foot gasser in No. 1 Rutherus, C NW Section 15-18-16w, Rush County, at 3,460-95 feet.

Rice County

Gypsy Oil Co.'s No. 1 Christopher, NE cor. Section 6-20-9w, Rice County, was acidized at 3,229-42 feet, and pumped 437 bbls. in 18 hours.

Lario Oil & Gas Co.'s No. 1 McFarland, SE NE SW Section 7-20-9w, which was started as a Siliceous lime test, found a 5,000,000-foot gas production at 2,227-33 feet, with a rock pressure of 730 pounds, and it was shut in for orders.

Atlantic Oil Producing Co. deepened No. 1 Brandenstein, C SE SE Section 10-19-10w, from 3,026 feet to 3,044 feet and it flowed 260 bbls. in two hours. It was held for potential test.

Gypsy Oil Co. completed No. 2 Burden, 871 feet north and 990 feet west of SE cor. Section 31-19-9w. It pumped 595 bbls. in a potential test from Siliceous lime at 3,253-66 feet.

New work in Rice County included the following operations: Gypsy Oil Co.'s No. 2 Christopher, NW NE NE Section 6-20-9w, spudded; Empire Gas & Fuel Co.'s No. 2 Heckel, NW NE SW Section 18-20-9w, drilling at 735 feet; Mid-Kansas Oil & Gas Co.'s No. 1 Proffitt, NW cor. SE Section 18-20-9w, drilling at 525 feet; Slick, Pryor & Lockhart's No. 1 Habiger, NE NW NE Section 27-18-10w, drilling at 477 feet.

Russell County

Bridgeport Machinery Co.'s No. 13 Mermis, SW cor. Section 33-13-15w, Russell County, was acidized in Oswald lime at 3,047-80 feet and swabbed 125 bbls. of oil in 24 hours.

Geary County

Ledournis' No. 1 Fechner, C SE NE Section 27-13-8, Geary County, was abandoned at 967 feet. It had a showing of gas at 733 feet and a showing of oil at 950 feet. It had been shut down since July, 1933.

Ellis County

Beardmore, Palmer and the Gypsy Oil Co.'s No. 2 Wieland, NE SE SE Section 36-12-16w, Ellis County, was completed. It pumped 187 bbls. in 24 hours from Oswald lime topped at 2,985 feet, with pay at 2,996-3,014 feet, which had been acidized.

Phillips Petroleum Co. has cellar dug for a test No. 1 Depitz, C SW SW Section 31-8-17w, Rooks County.

Chautauqua County

Theta Oil Co.'s No. 1 Webb, 660 feet from south line and 200 feet from the west line, SE Section 23-31-10, Chautauqua County, was completed. It is a 25-bbl. pumper at 1,330-57 feet.

Butler County

E. B. Shawver's No. 1-A Ralston, 990 feet south and 660 feet east of C Section 8-28-4, Augusta district, Butler County, was abandoned. It was a very small well at 2,003-68 feet, Kansas City lime.

Kingman County

Skelly Oil Co. completed No. 1 North Ratcliff, CEL SW Section 19-27-10w, Kingman County, which flowed 700 bbls. in 24 hours from Lansing lime at 3,430-92 feet. Same company's No. 2 Ratcliff, CSL NW Section 30-27-10w, pumped 150 bbls. in 24 hours from pay at 3,407-63 feet, and was completed.

Sedgwick County

Magnolia Petroleum Co.'s No. 1 Country Club, SE SW NW Section 17-27-2e, Sedgwick County, was abandoned as a failure. It had a showing of oil and water at 2,955-65 feet. It had been plugged back from 3,307 feet, where it was a hole full of water. Same company made a location for No. 8 W. K. H. Trust Co., SE NE NE Section 19-27-2e.

Darby Petroleum Co. and Lauck drilled a failure in No. 1 Lauck, SE SW SE Section 17-27-3, Sedgwick County. It had Wilcox sand at 3,112-19 feet, and a hole full of water.

Derby Oil Co.'s No. 4 Gorman, NW SW NW SW Section 6-26-1e, Sedgwick County, plugged back from 3,367 feet to 3,200 feet, and then to 2,670 feet, but found nothing in either formation tested, and plugged the hole.

Marylin Oil Co.'s No. 1 Richards, SW NW NE SW Section 6-26-1e, was com-

(Continued on Page 56)

Wildcat Operations in Kansas

Week Ending January 6
(Descriptions are East unless marked otherwise)

BARTON COUNTY

Company, farm and location—	Remarks:
Atlantic Oil Prod. Co.'s No. 1 Schneider, C NE SW Sec. 15-20-13w	Drlg. 3,471 ft.
Gypsy Oil Co.'s No. 1 Soderstrom, SE NE NW Sec. 21-17-13w	Drlg. 2,656 ft.
Danciger et al's No. 1 Roesler, SW NE Sec. 11-18-11w (O.W.D.D.)	Drlg. 3,105 ft.
Helmerich & Payne's No. 1 Everleigh, C SW SE Sec. 13-18-13w	T.D. 3,300 ft.; running 6-in. csg.
Skelton et al's No. 1 Ott, C SE SE Sec. 16-19-14w	Acidized; 2,600 ft. of fluid in hole; S.D.

BUTLER COUNTY

Darby Pet. Co. and Lauck's No. 1 Lauck, SE SW SE Sec. 17-27-3	Dry and abd. 2,828 ft.

COWLEY COUNTY

Yarnell et al's No. 1-A Speer, SE NE NE Sec. 31-33-6e	U.R. 6-in. csg.; T.D. 3,310 ft.
Van Meter et al's No. 1 Moore, NE cor. Sec. 5-35-4	Rig.

EDWARDS COUNTY

Atlantic Oil Prod. Co.'s No. 1 Bradbridge, C SE NW Sec. 1-24-16w	S.D. in granite 4,478-4,500 ft.

FINNEY COUNTY

National Ref. Co. et al's No. 1 Smith, C SE SW Sec. 2-23-29w	T.D. 3,323 ft.; fishing.

GEARY COUNTY

Ledownes et al's No. 1 Fechner, C SE NE Sec. 27-13-8	Abd. 967 ft.

GREENWOOD COUNTY

DeGenther et al's No. 1 Garrison, NW NE NW Sec. 20-25-11	Machine.

HARVEY COUNTY

Hartman et al's No. 1 Jones, C NW SW Sec. 19-25-1w	T.D. 2,940 ft.; set 6-in. csg. at 2,904 ft.; S.D.

McPHERSON COUNTY

Dieter et al's No. 1 Carlson, SE cor. Sec. 4-19-3w	S.D. 3,400 ft.
Jim MacIson's No. 1 Boesker, SE NW Sec. 29-20-1w	Spudded.
Harris & Haun's No. 1 Rupp, SW cor. Sec. 13-21-2w	T.D. 2,085 ft.; S.D.
Wakefield & Hawkins' No. 1 Smith, SW SE Sec. 17-17-1w	Rigging up.

PHILLIPS COUNTY

Ashby et al's No. 1 Donaldson, C NE NE Sec. 25-5-18w (O.W.D.D.)	C.O. 630 ft.

RENO COUNTY

Roth & Faurot's No. 1 Yoder, C NW NW Sec. 15-24-5w	Bailing; T.D. 3,426 ft.

RICE COUNTY

Slick, Pryor & Lockhart's No. 1 Schmict, C NW NW Sec. 15-18-10w	Rig.
El Dorado Ref. Co.'s No. 1 Wernet, SW NE Sec. 12-20-6w	Drlg. 2,800 ft.
Elmer Corn et al's No. 1 Hunter, NE cor. Sec. 35-19-7w	Rig on ground.
Lario O. & G. Co. and Elwell's No. 1 Russell, NE SW Sec. 29-23-7w	T.D. 2,435 ft.
Verne Simmons et al's No. 1 Hunter, NE cor. Sec. 35-19-7w	Rigging up.
Langston et al's No. 1 Markle, NE SW Sec. 1-20-9w	T.D. 1,057 ft.

ROOKS COUNTY

Phillips Pet. Co.'s No. 1 Dopitz, C SW SW Sec. 31-8-17w	Cellar.

RUSSELL COUNTY

Western Exploration Co.'s No. 1 Andrea, SW cor. Sec. 30-15-12w	Skidding rig 25 ft. west.
Tom Palmer's No. 1 Steinle, NW SW Sec. 22-13-14w	Drlg. 1,380 ft.

SALINE COUNTY

Lario O. & G. Co.'s No. 1 Burrell, NW SW Sec. 15-14-2w	H.F.W. 3,405-07 ft.; abd.

SEDGWICK COUNTY

Cameron et al's No. 1-A Funk, SW SE NW Sec. 6-26-2e	H.F.W.; U.R. 10-in. csg. to 1,210 ft.
Wentz et al's No. 1 Stockamr, SW NE Sec. 31-26-2w	Drlg. 3,177 ft.

STAFFORD COUNTY

Atlantic Oil Prod. Co.'s No. 1 Willinger, C NE NE Sec. 18-22-11w	H.F.W. 3,008-50 ft.; S.D.
Vickers Pet. Co. and Phillips Pet. Co.'s No. 1 Cravens, SW NE Sec. 15-25-11w	Drlg. 935 ft.

SUMNER COUNTY

Wentz and Continental Oil Co.'s No. 1 Kerns, SE cor. NE Sec. 6-34-1w	Location.

WOODSON COUNTY

Lewis Bros.' No. 1 Riggs, SW cor. Sec. 10-26-14	Set pipe at 765 ft.; S.D.

Liberty County Wildcat Makes 1,300 Barrels; Northern Limits of Greta Field Defined

By W. A. SPINNEY
Gulf Coast Bureau, The Oil and Gas Journal

HOUSTON, Tex., Jan. 8.—Gulf Production Co.'s wildcat well in Liberty County, at Tarkington Prairie, south of Cleveland, was shut in after it produced a full 24 hours making 1,300 bbls. It was flowing at the rate of 52 bbls. an hour when shut in. Most of the available storage is full and until arrangements have been completed for a pipe line connection little more can be told of the potentiality of the well and area. Two locations have been tentatively made, one about 1,500 feet due south of the well and the other about 2,000 feet due west of the well. The well is producing from sand found at 5,717-24 feet. The oil is 40 gravity corrected and the well made its production through a three-eighths inch choke with a working pressure of 940 pounds.

The Texas Railroad Commission has issued regulations governing the spacing of wells in the field, limiting the development to the same basis as in effect in the Conroe and Livingston Fields. This provides no wells shall be drilled closer than 933 feet from another well, nor less than 466 feet from any property line. Permanent rules will be discussed at a hearing to be held in Austin January 16. The Gulf has approximately 20,000 acres surrounding the well and only a few small scattered tracts are available.

Colorado County

Plymouth Oil Co.'s No. 2 Ream, in the Garwood area, Colorado County, has set and cemented casing at 6,185 feet. This wildcat found a showing of oil in sand at 6,194-97 feet about a week ago and a production test is expected to be made the first part of the week.

Polk County

Dick Schwab's No. 2 Kirby Lumber Co. in southern Polk County, another wildcat well, was opened for two hours last week making considerable gas and about 30 bbls. of oil. This well has not been open long enough at any one time to clean itself and its possibilities are not yet known. It found oil and gas in sand from 4,778-4,850 feet. It is in the extreme southern part of the county, about 9 miles southeast from the Livingston Field, discovered by the same operator.

Vinton Field

In the Vinton Field, Calcasieu Parish, two completions were reported, one for 250 bbls. and the other 225 bbls. a day. The Wilson-Broach Co.'s No. 12 Wilson Strip, in Section 33-10s-12w, was pumping at the rate of 250 bbls. a day after failing to start flowing from a total depth of 3,288 feet. Gulf Refining Co.'s No. 71 Gardner-Noble-Gray, Section 33-10s-12w, started flowing 225 bbls. a day after setting one joint of 4½-inch screen at 2,820 feet. Production was through a three-eighths inch choke. A string of 7-inch casing was set at 2,790 feet.

Iowa Field

The southwest limits of the Iowa Field, located along the boundary lines of Jefferson Davis and Calcasieu Parishes, was indicated by a test drilling below the level of the pay horizon found in other wells in the field. This was Magnolia Petroleum Co.'s No. 1 Mitchell LeBleu, in NE cor. SE Section 14-9s-7w, a mile southwest of the main part of the field, down 7,272 feet in shale at latest report. The pay sand found in the other wells in the main part of the field varies in depth from 6,700 to 7,000 feet.

Shell Petroleum Corp.'s No. 1 Johnson, NW cor. SW Section 18-9s-6w, found an oil sand from 6,967-79 feet and a drill stem test is being made. It is the same sand found in the company's No. 2 Stafford, where it was about 100 feet higher. No. 2 Stafford is the most southern producer and is flowing 620 bbls. of oil a day through a fourteen-sixty-fourths inch choke from a total depth of 6,640 feet. No. 1 Johnson is 530 feet due south of No. 2 Stafford.

Shell Petroleum Corp.'s No. 1 Tuten, in Section 13-9s-7w, is due for another production test, and screen has been set and tubing run into the hole. The well failed to produce a few days ago when perforated pipe was set in the hole. This was pulled out and the hole cleaned out.

Barnsdall Oil Co.'s No. 3 Fontenot, in Section 7-9s-6w, on the east edge of the Iowa Field, was expected to be completed in a few days as it was drilling at 6,952 feet.

Roanoke

Drill stem tests of sands showing oil in Shell Petroleum Corp.'s No. 1 Kratzer wildcat, at Roanoke, Jefferson Davis Parish, proved unsuccessful. The test is about a mile north of Humble Oil & Refining Co.'s No. 2 DeVilbiss. A drill stem test resulted in salt water and drilling deeper was resumed. The well tested 11 feet of sand from 4,493-4,504 feet.

Black Bayou

Shell Petroleum Corp.'s No. 17 Watkins, Black Bayou in Cameron Parish, made a drill stem test during the week, testing 19 feet of sand from 4,123-42 feet where it showed mud and salt water. This test is 660 feet east of the same company's No. 15, a 620-bbl. producer, the largest in the field.

Tomball Field

One well was completed in the Tomball Field in Harris County, Humble Oil & Refining Co.'s No. 1 W. Theis, in the J. H. Edwards Survey, which made 15 bbls. of oil an hour from the sand at a total depth of 5,617 feet through a one-quarter inch choke. This well is in the northern part of the field.

Stanolind Oil & Gas Co. and others' No. 2 Theis, in the J. H. Edwards Survey, in Montgomery County, flowed for 30 minutes and then went dead. It was expected to be reworked the first part of the week. The total depth of the well was 5,543 feet.

Amerada Petroleum Corp.'s No. 1 Bode, in the J. Hooper Survey, Harris County, was drilling at 6,346 feet in shale with nothing showing. Same company's No. 1 Nelson, in Joseph House Survey, was flowing into the pits with no gauge as to the oil production. The total depth of the well was 5,585 feet. The same company's No. 1 Otto Rudel, in the Joseph House Survey, also was flowing into the pits, with no estimate of its production, from a total depth of 5,582 feet.

Louise Area

In the Louise area of Wharton County in lower Gulf Coast district the drilling tests there report little change. Pure Oil Co.'s No. 1 Lancaster, in the Morris and Cummings Survey, Section 23, was fishing for a stuck drill stem at total depth of 7,142 feet. Same company's No. 1 McIntyre was fishing for a screen, total depth 6,467 feet. The same company's No. 1 Houston was drilling the cement plug and was expected to be the next test completed in the Louise Field. The total depth of this well was 6,451 feet in sand showing oil. The same company's No. 1 Wilder was reaming to straighten the hole at a total depth of 7,614 feet.

Louisiana Tests

Humble Oil & Refining Co.'s No. 2 DeVilbiss, at Roanoke, in Jefferson Davis Parish, is drilling at 8,364 feet and is the deepest drilling test in the State at this time. Cores taken at the test show that it has been drilling in sand since 8,262 feet.

On the Riverside prospect northwest of the Jennings Field in Acadia Parish, Mills Bennett Production Co.'s No. 1 Riverside Irrigation, Section 61-9s-2w, was drilling in shale at 4,625 feet.

Superior Oil Co. and others' No. 1 Hernandes, a wildcat test in Section 34-8s-3e, in Acadia Parish, is drilling at 5,525 feet in sandy shale.

On the Hayes prospect in Calcasieu Parish, Gulf Refining Co.'s No. 1 Sweet Lake, in Section 29-10s-5w, is drilling in shale at 7,225 feet.

In Lafourche Parish, Barnsdall Oil

Gulf Coast Fields and Wildcats

Week Ending January 6

DAMON MOUND—BRAZORIA COUNTY

Company, farm and location—	Remarks:
Intercoastal Oil Co.'s No. 11 Wisdom, 350 ft. E of No. 6, Blk. 51, Lot D, A. Durst Sur.	Drlg. shale 2,565 ft.

MANVEL—BRAZORIA COUNTY

Texas Co.'s No. 6 Belcher, H. N. Little Sur., S 42 deg. W 2,400 ft., S 48 deg. E 400 ft. from N cor. lease.	T.D. 5,476 ft.; standing.
Texas Co.'s No. 6-B Belcher, 320 ft. NW, 900 ft. NE from S cor. of H. N. Little Sur.	T.D. 5,133 ft.; cmtd. csg.
Texas Co.'s No. 7 Belcher, 1,430 ft. S 48 deg. E, 900 ft. W 42 deg. E from NW cor. of W. T. Belcher "A" lease, H. N. Little Sur.	Drlg. shale 5,412 ft.

STRATTON RIDGE—BRAZORIA COUNTY

Amerada Pet. Corp.'s No. 5 Seaborn, Austin-Willis Sur., 600 ft. E of No. 3 and 229 ft. S at R/A.	Drlg. shale 2,825 ft.

BARBERS HILL—CHAMBERS COUNTY

Mills Bennett Prod. Co.'s No. 1-D Barber, 78 ft. S, 65 ft. W of NE cor.	Drlg. salt 3,978 ft.
Mills Bennett Prod. Co.'s No. 4 Means, 150 ft. W of No. 3, Henry Griffith League	Drlg. shale 4,981 ft.
Sinclair Prairie Oil Co.'s No. 15 Wilburn, Henry Griffith League, 150 ft. W of No. 14	T.D. 4,188 ft.; cutting and pulling screen.
Sinclair Prairie Oil Co.'s No. 17 Wilburn, 125 ft. N of S line, 150 ft. W of No. 16, H. Griffith League	Drlg. sandy lime 983 ft.
Sun Oil Co.'s No. 15 Wilburn, 405 ft. from E, 50 ft. from W line	Drlg. sandy lime 916 ft.
Sun Oil Co.'s No. 14 Wilburn (W.O.), Henry Hodges Sur.	T.D. 5,089 ft.; cmtd. back to 4,310 ft.; drlg. 4,734 ft.
Sun Oil Co.'s No. 17 Wilburn, Henry Griffith League, 150 ft. W of No. 6 and 50 ft. S of N line.	Drlg. rock 3,116 ft.
Sun Oil Co.'s No. 18 Wilburn, Henry Griffith League, 50 ft. N of S line, 50 ft. E of W line of lease	Drlg. shale 3,501 ft.
Sun Oil Co.'s No. 19 Wilburn, 220 ft. E of W line, 343 ft. S of N line, William Hodges Sur.	Derrick.
Sun Oil Co.'s No. 20 Wilburn, Wm. Hodges Sur., 60 ft. E of W line, 343 ft. S of N line	Rigging.
Texas Gulf Prod. Co.'s No. 5-H Kirby, 333 ft. W of No. 6-H, 70 ft. N of S line, Henry Griffith League (W.O.)	T.D. 5,024 ft.; sidetracked at 3,179 ft.; drlg. 3,770 ft.
Texas Gulf Prod. Co.'s No. 3 Wilburn, 50 ft. out of the upper SE cor. of lease, Wm. Hodges Sur.	Comp. 1,123 bbls.; 17/32-in. choke, 4,252 ft.
Texas Gulf Prod. Co.'s No. 4 Wilburn, Wm. Hodges Sur., 330 ft. N of S line, 50 ft. W of E line	Rigging.
Texas Co.'s No. 6 Wilburn (W.O.), Henry Griffith League, 250 ft. W of No. 4, 50 ft. S line of lease.	T.D. 5,203 ft.; reaming.
Yount Lee Oil Co.'s No. 1 Chambers, 1,760 ft. N line, 2,500 ft. W line of Bloodgood Sur. (W.O.)	Abd. 5,318 ft.
Yount Lee Oil Co.'s No. 7 Phillips, offset Sun Oil Co.'s No. 18 Wilburn	Drlg. shale 698 ft.

BIG CREEK—FORT BEND COUNTY

Gulf Stream, Inc.'s No. 1 A. H. Theis, 236 ft. E of old No. 4 A. H. Theis in line, Mitchell Young Sur.	Standing 2,847 ft.
McPhail et al's No. 2 Wheat	Standing 1,230 ft.

BLUE RIDGE—FORT BEND COUNTY

San Jacinto Oil Co.'s No. 3 Blakeley, 275 ft. W of No. 2, E. Drew Sur.	Drlg. shale 4,658 ft.

ORCHARD—FORT BEND COUNTY

Gulf Prod. Co.'s No. 38 Moore, James Frazier Sur., 280 ft. E, 100 ft. S of No. 31	Drlg. shale 2,183 ft.

RABBS RIDGE—FORT BEND COUNTY

Gulf Prod. Co.'s No. 3 Hammerstram, Samuel Kennedy Sur.	Shale 5,395 ft.
Humble O. & R. Co.'s No. 9 George, J. Rabb Sur.	Drlg. shale 3,733 ft.
Humble O. & R. Co.'s No. 9 M. Gubbles, Sam Kennedy Sur., 814 ft. SE of No. 7	T.D. 5,336 ft.; cmtd. csg.
Humble O. & R. Co.'s No. 19-B Lockwood & Sharp, J. Rabb Sur.	Rigging.
Humble O. & R. Co.'s No. 20-B Lockwood & Sharp, J. Rabb Sur.	Drlg. shale 1,672 ft.
Humble O. & R. Co.'s No. 21-B Lockwood & Sharp, J. Rabb Sur.	Drlg. shale 5,232 ft.
Humble O. & R. Co.'s No. 2 Walters, R. Peebles Sur., 300 ft. from N and E lines of lease	Abd. 5,478 ft.

SUGARLAND—FORT BEND COUNTY

Dewalt Oil Co.'s No. 1 Peterson	Drlg. sticky shale 2,790 ft.

HIGH ISLAND—GALVESTON COUNTY

Yount Lee Oil Co.'s No. 2 Broussard-Orme, Martin Dunman Sur., 200 ft. S of No. 1-B Cade	Drlg. shale 5,339 ft.
Yount Lee Oil Co.'s No. 4 Broussard & Orme, M. Dunman Sur., 129 ft. SW of No. 3	Rigging.
Yount Lee Oil Co.'s No. 2-B Cade, 170 ft. from N line, 100 ft. from E line of 40-ac. lease, N. Fitzsimmons Sur.	Rigging.
Yount Lee Oil Co.'s No. 38 Cade, 600 ft. NW of No. 1-B Cade, 755 ft. from No. 1 Smith, N. Fitzsimmons Sur.	Drlg. sand 5,734 ft.

(Continued on Page 75)

Co.'s No. 1 Harang, in Section 67-17s-20e, a wildcat test, is drilling at 7,000 feet in shale.

The Standard Oil Co. of Kansas' No. 1 Hopkins in Section 83-10s-6e, in St. Martin Parish, is drilling at 7,010 feet in shale.

In the Gillis area of East Hackberry, Cameron Parish, the Union Sulphur Co.'s No. 1 Barbee, a semiwildcat, is drilling in shale at 7,245 feet.

Arriola Area

Republic Production Co. and Houston Oil Co.'s No. 6 Arriola fee, in Hardin County, made a drill stem test of sand at 4,460-89 feet. Twenty-two fourbles of salt water with a showing of oil was recovered after seven minutes. The test resumed drilling and at last report was at 4,708 feet.

Livingston Field

The productive area of Livingston Field in Polk County was further defined by the completion of another dry hole on the west side. Harrison and Abercrombie's No. 2 Carter found salt water in sand at a total depth of 4,435 feet, where it was abandoned. This test was a half mile west of the production in the field and it defines the producing area to the southwest.

Humble Oil & Refining Co.'s No. 6 Grandbury, on the west side of the Livingston Field, was abandoned at a total depth of 4,408 feet. This test is about a half mile due west of the same company's No. 1 Grandbury. About 2 miles west of production Humble Oil & Refining Co.'s No. 8 Grandbury was drilling at 4,010 feet.

Shell Petroleum Corp.'s No. 1 J. Duff, in the north end of the Livingston Field, was completed for 3,500,000 feet of gas a day from sand at 4,304 feet, with a pressure of 1,200 pounds.

The semiwildcat test of the Gist Oil Corp. was reported to have found a showing of oil at approximately 4,268 feet, where it was standing waiting for casing. This test is about 7,400 feet due north of production in the Livingston Field.

Victoria County

Coleto Creek discovery well which was completed about six months ago as a gasser is now making oil. The well is Stoneleigh Oil & Gas Co.'s No. 1 Terrell, in the southwest corner of the R. Manchola Survey, in southwestern Victoria County, completed at a total depth of 4,442 feet. It gauged at the rate of 204 bbls. a day. The flow of oil resulted from the well being used to supply fuel to other drilling tests in the vicinity. When it was shut in and opened again it was estimated to be making 8 bbls. of oil an hour. The oil is similar to that made by the company's No. 1 Zimmer, about a half mile east. The Zimmer well has been abandoned after a gas blowout. No. 1 Terrell has been supplying gas to the three other tests drilling in the field.

The only other drilling test in the Coleto Creek area is Calvert and others' No. 1 Dietzel, about a mile to the southeast of No. 1 Terrell, which has resumed operations after being shut down for three weeks. It is drilling in sandy shale at 4,560 feet showing gas with an odor of oil.

John F. Camp's No. 2 Maurer is a new location 980 feet south of No. 1 Terrell, and is rigging up and is expected to start drilling the first part of the week. No. 1 Maurer, on the east end of the property, was completed as a wet gas well in 13 feet of gas sand found at 4,455 feet. No. 1 Maurer is making considerable distillate and also expected to turn into an oil well soon after it begins to supply gas to No. 2 Maurer.

Greta Field

The northern limits of the Greta Field in Refugio County were defined during the week by Trinity Drillers and others' No. 1 Welder, in James T. McGrew Survey, which found water in the regular Greta sand and was drilling deeper at 4,925 feet. The regular sand is found around 4,400 feet in the main part of the field. This test is the most northern that is drilling in the field at this time. It is about a half mile northeast of the nearest other producer.

Stanolind Oil & Gas Co. and others' No. 1 Welder, in the J. T. McGrew Survey, was completed last week for 30 bbls. of oil an hour from the sand at 4,379-99 feet. It produced at this rate for three hours after the screen had been reset.

On the southeast edge of the field Standard Oil Co. of Kansas' No. 1 O'Connor was completed making considerable gas with a pressure of 1,600 pounds on the tubing and 1,750 pounds on the casing through a one-quarter inch choke. It made only 24 bbls. of oil in 24 hours from a total depth of 4,393 feet in sand.

An interesting well that extends production a quarter mile to the southeast one location is Southwest Oil Co.'s No. 4-B O'Brien, which found a showing of oil in sand at a total depth of 4,378 feet. It is expected to be on production in a few days.

Deep Sand Test

The extent of the deep producing sand in the Greta Field is still unknown as only one well has been completed in this sand found at 5,900 feet. Two other tests have been drilled past this depth and only one found a showing of oil about 100 feet deeper, while the other was drilling about 500 feet deeper. Nesral Oil Co.'s No. 1 Ira Heard, one location east of the only deep sand producer on the east side of the field, was drilling at 6,470 feet in shale at latest report. Same company's No. 1 V. E. Heard, two locations west of the deep sand producer, found oil at 5,998-6,010 feet, and after several attempts to complete the well at this depth it was found necessary to recement the casing. The company was preparing to drill out the cement the first part of the week.

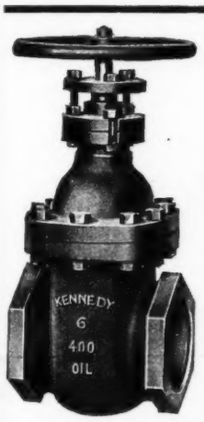
Other wells completed in the field include Atlantic Oil Producing Co.'s No. 4-A O'Brien, which made 196 bbls. through a three-sixteenths inch choke from a total depth of 4,395 feet; same company's No. 2 Heard, 195 bbls. of oil through a three-eighths inch choke from a total depth of 4,392 feet; Circle W Oil Co.'s No. 6 O'Brien, in the north end of the field, 300 bbls. a day through three-eighths inch choke from a total depth of 4,397 feet; United Production Co.'s No. 11 Fox, on the extreme west edge of the field, 420 bbls. of oil a day through a three-eighths inch choke from a total depth of 4,395 feet.

The Texas Railroad Commission held a hearing in Houston January 5 on increasing the allowable of the Barbers Hill, High Island and Hull Fields. Operators in Barbers Hill Field, Chambers County, suggested the allowable be increased from the present 14,000 bbls. daily to 18,000 bbls. The operators with production in the Jackson sand area in the Hull Field, Liberty County, want the allowable on the Jackson sand increased from 3,000 bbls. a day to 5,000 bbls. The High Island operators suggested an increase from 5,000 bbls. to 7,800 bbls. daily. The suggestions were taken under advisement by the commission.

Conroe Completions

Conroe Field completions during the week include the following wells: Alpha Petroleum Co.'s No. 2 Krohn, 40 bbls. an hour through a one-quarter inch choke from a total depth of 5,118 feet; Humble Oil & Refining Co.'s No. 44 Moore, 92 bbls. an hour through a one-half inch choke from a total depth of 5,127 feet; Humble Oil & Refining Co.'s No. 29-A South Texas Development Co., 6 bbls. an hour through a one-half inch choke from a total depth of 5,198 feet.

The relief well being drilled by the Humble Oil & Refining Co. and others to kill Harrison & Abercrombie's crater well in the Conroe Field was standing cemented at a total depth of 5,070 feet over the week-end. The crater well, about 427 feet to the southwest, has been flowing open since July 19, making an average of 7,500 bbls. daily at present.



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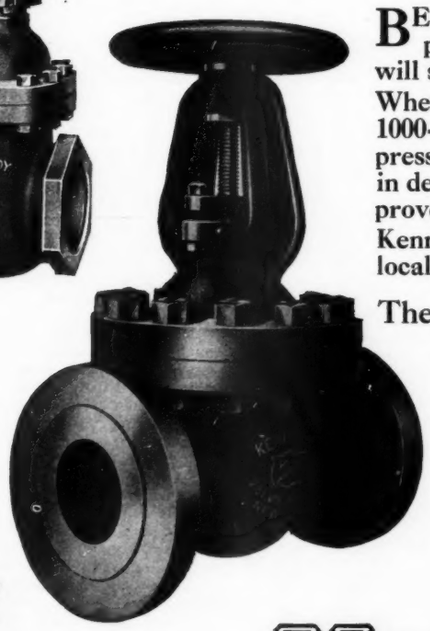

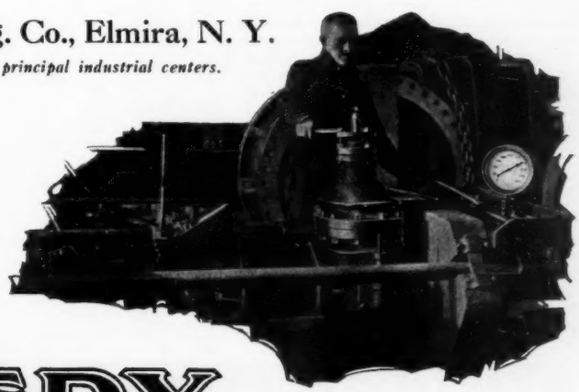

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Underground Survey of Termo Wells Ordered by Court in Huntington Beach Tideland Case

By L. P. STOCKMAN
Staff Correspondent, California Fields

LOS ANGELES, Calif., Jan. 8.—Conclusion of the litigation involving exploitation of Huntington Beach tidelands is a step nearer through Superior Judge L. M. Turrentine ordering an underground survey of the Termo Corp.'s wells, Nos. 2, 4 and 5, to determine whether they have penetrated the tidelands. The order was issued when officials of the Termo Corp. admitted on the witness stand that the rotary table had been tilted by placing a plank under it on the side toward the ocean and that the hole was subsequently engineered in such a manner as to cause the bit to deviate toward the tidelands. By stipulation the surveys on these wells will be conducted by Alexander Anderson of the Oil Well Surveys, Inc., of Fullerton.

Late in December state officials instituted additional litigation at Huntington Beach to prevent completion of C. W. Camp's No. 1-A Laughlin, which was spudded in September 11, several days after the issuance of an ultimatum by state officials that no further wells would be allowed to produce from the tidelands. It is the contention of the state that a sufficient number of wells have been completed in the tideland area and that additional drilling would jeopardize production activities if the bit in a drilling project should drill through the casing of a producing well. State Finance Director Vandegrift sued C. W. Camp for $50,000 for asserted trespass and petitioned the court to grant an injunction to prevent the extraction of any oil from the hole and the issuance of an order permanently abandoning the hole in question.

The city of Huntington Beach entered the tideland litigation controversy this week by filing a suit to restrain the State's Attorney General from filing additional suits against operators in the town lot area. The complaint filed by the city of Huntington Beach alleges that, "the state owns the tidelands only in trust for the people and then only for the purposes of commerce, fishing and navigation. The state will not finish any suit but instead will compromise the cases because operators are financially unable to fight back. By this system of harassing operators, the state is forcing compromises and demanding exorbitant royalties. Operators are reluctant to start new wells and this seriously interferes with the increase of assessed valuations."

Argument on the merits of the state's suits against the Termo Corp. and C. W. Camp are expected to proceed immediately with the result that the status of wells producing oil and gas from beneath state tidelands should be determined in the near future. Upon the conclusion of this litigation the production of Huntington Beach will be reduced to conform with the allowable quota of the field.

Kettleman Hills

Three excellent wells were completed in the Kettleman North Dome Field during the past week, one of which, Union Oil Co.'s No. 4 Amerada King, was brought in flowing at the rate of 12,000 bbls. per day. This new producer, located in the Huffman area in the western end of the field, was bottomed at 8,520 feet and finished with a 4¾-inch combination liner. The liner used in this well has 966 feet of 250-mesh screen, 31 feet of blank pipe and 5-foot adapter. The Union has started rig construction for No. 5 Amerada King and this well is expected to get under way within the next three weeks. The Standard Oil Co. successfully finished No. 4-29-J during the early part of the current week and this new producer tanked 3,570 bbls. of clean 34.1 gravity oil during the initial 24-hour flow test. This new well was bottomed at 8,519 feet and finished with a 5-inch liner carrying 912 feet of perforated and 4¾-inch flow string landed at 7,610 feet.

The Kettleman North Dome Association has just completed well No. 85-30-J and this new producer was brought in flowing 4,125 bbls. initially from 8,762 feet. Kenda finished this new well with 1,001 feet of 6⅝-inch liner landed at 8,761 feet and perforated at 7,787-8,209 feet and at 8,290-8,761 feet. Several additional projects are scheduled to get under way in the North Dome within the next 30 days as Kenda is building new rigs for Nos. 36 and 67 in Section 20-21-17. The Standard is rigging up No. 4-27-J and is grading locations for No. 6-33-J, 2-35-J and 54-1-P. The Associated is expected to finish No. 4 Whepley some time during the next 30 days as the bit in this hole is rotating in a rather good looking oil sand. Due to the probability that the upper part of the Temblor is wet in this particular section of the field, the company has landed and cemented the water string substantially below the point originally used. In No. 3 Whepley, which has been idle for several months due to water trouble, the 9-inch water string was landed and cemented at 7,107 feet. In No. 4 Whepley, the Associated's next completion in the North Dome, the 8⅝-inch water string has been landed at 7,790 feet.

North Kettleman Oil & Gas Co. has been making exceptionally good footage in No. 1 Lillis-Welsh during the past few weeks, and, barring the development of further difficulty, should reach the original depth of 10,944 feet within the next 30 or 60 days. It is the present intention to land a secondary water string in this hole as tests have indicated that water has been entering the hole a little below the shoe on the original water string landed and cemented at 9,638 feet. The Middle Dome Corp. is building rig for No. 58-19-V for a new well to be drilled in the Middle Dome of Kettleman Hills and spud is expected to be made within the next two or three weeks.

Huntington Beach

Only one new well was chalked up in the Seventeenth Street town lot area of the Huntington Beach Field during the current week. This was P. W. Willett's No. 2, which was brought in flowing 1,312 bbls. of 25.3 gravity oil per day through two 1½-inch beans from 4,600 feet. Reading Oil Co.'s No. 1 Anderson, completed last week flowing 610 bbls. daily from 4,740 feet, subsequently built up and was officially listed doing 2,560 bbls. of oil and 3,000,000 feet of gas per day. The increased production registered by this well reflects the use of three 1½-inch beans.

Drilling operations in the Huntington Beach town lot area, due to the uncertainty of the validity of future work, has shown a substantial decline. Completion of new wells has dropped off and will continue at a relatively low rate until the status of tideland exploitation has been definitely determined. There are still a few incompleted drilling projects under way which were started previous to the deadline established by state officials and are therefore eligible for completion in the future.

Coyote

The Standard listed a new completion in the West Coyote Field of Los Angeles Basin during the early part of the current week when No. 114 Murphy Coyote was finished doing 355 bbls. of oil from 6,192 feet after the hole had been plugged back from 6,292 feet. The Standard is running three additional strings of tools in the West Coyote Field and is grading for three more locations. No. 117 Murphy Coyote, one of the Standard's projected new wells, will be a direct offset to No. 1 Severns Drilling Co., a recent completion finished doing 205 bbls. per day from 5,505 feet.

In the East Coyote Field, Sy Rubens is making preliminary preparations to finish No. 1 Tuffrees on the beam from 3,368 feet. Union Oil Co. has concluded drilling operations on No. 2 Callender in the Dominguez Field at 4,416 feet and this well, which has been deepened to the second Callender zone, should be given an early production test. The Union's No. 25 Hellman also looks like an early completion as the bit in this hole is rotating in oil sand at 5,037 feet. This well made a preliminary flow during the early part of the week but came in wet and will require further work. The Shell, with four strings of tools in operation in the Dominguez Field, is expected to complete two or three of this quartet within the next few weeks.

Montebello

The Montebello Field, where the Universal Consolidated proved a new deep zone several months ago, will apparently be the scene of additional but conservative development during 1934. Since completion of the discovery well, three additional wells have already been started and the Standard is building rigs for No. 73 Baldwin and No. 18 Temple. The new wells actually started since completion of the deep zone discovery well are No. 4 Barry of the Texas Co. and No. 1 Alvitre and No. 1 Repetto of the Univesal Consolidated Oil Co.

Community Oil Co. resumed work on its Montebello outpost several weeks ago and will begin making new hole as soon as the fish can be recovered. The Richfield district, which was the scene of a rather aggressive drilling campaign several months ago, is almost as quiet as a cemetery as there are only two strings of tools in operation at present. One of these wells, the Union's No. 4 A.&P., looks like an early completion as the bit is at present rotating in the oil sand.

In the Seal Beach Field, Continental Oil Co. is still held up with a fishing job on No. 32 Bixby, a new well, due to the loss of a bit at 4,017 feet. Five new wells are scheduled to get under way in the Long Beach Field within the next few weeks and a check of development work already under way indicates the probable completion of five wells within the next 30 days.

Shell Oil Co. is putting the finishing touch on new rigs for Nos. 9 and 10 on the Andrews lease and both projects should begin making hole soon. The Westport Oil Co. has completed a new rig at Burnett & Gundry and should move in rotary drilling equipment some time during the coming week. V. R. G. Wilbur is rigging up drilling equipment and should begin making hole in the near future. D. D. Dunlap has started rig construction for No. 8 Signal and the Allied Petroleum Corp. has foundation in for a new rig for No. 13 Long Beach, which will be drilled near Willow and Lewis Streets.

Mountain View

Completion a short time ago of the Long Beach Petroleum Co.'s No. 1 Ved-

TANKER SHIPMENTS FROM LOS ANGELES TO DOMESTIC AND FOREIGN PORTS

	Dec. 23		Dec. 16			
Intercoastal-domestic—	Total this week	Daily average	Total last week	Daily average	This year to date	Same time last year
Crude oil	.....	.....	.....	.....	80,650	213,322
Fuel oil	193,156	27,594	76,305	10,901	4,758,707	.....
Diesel and gas oil	95,355	13,622	74,815	10,688	1,472,581	1,635,328
Gasoline	73,412	10,487	183,382	26,197	10,554,329	7,560,064
Kerosene	259,582	37,083	50,214	7,173	1,216,090	280,481
Other finished oil	15,296	2,185	.....	.....	105,853	.....
Other unfinished oil	.....	.....	.....	.....	72,584	.....
Foreign exports—						
Crude oil	32,761	4,680	61,625	8,804	7,468,060	8,265,264
Fuel oil	94,688	13,527	70,783	10,112	7,706,012	7,724,430
Diesel and gas oil	298,417	42,631	28,731	4,104	3,618,503	2,743,576
Gasoline	.....	.....	91,199	13,028	5,365,018	8,113,934
Kerosene	36,683	5,240	.....	.....	1,865,305	2,841,588
Naphtha distillates	.....	.....	.....	.....	.....	120,075
Other finished oil	.....	.....	.....	.....	12,086	.....
Other unfinished oil	.....	.....	.....	.....	66,375	.....
Coastwise-domestic—						
Crude oil	.....	.....	.....	.....	6,170,379	13,874,967
Fuel oil	132,425	18,918	385,023	55,003	10,521,763	11,600,185
Diesel and gas oil	12,070	1,724	.....	.....	981,032	1,374,306
Gasoline	60,265	8,609	331,393	47,342	12,266,635	14,707,225
Kerosene	615	88	.....	.....	197,371	160,886
Naphtha distillates	.....	.....	.....	.....	27,651	.....

TANKER SHIPMENTS FROM SAN FRANCISCO TO DOMESTIC AND FOREIGN PORTS

Intercoastal-domestic—						
Diesel and gas oil	97,127	13,875	198,610	28,373	915,276	650,980
Gasoline	.....	.....	.....	.....	804,548	1,373,367
Kerosene	.....	.....	47,706	6,815	530,136	257,686
Lubricants	.....	.....	.....	.....	41,339	39,769
Foreign exports—						
Crude oil	38,801	5,543	39,969	5,713	1,775,431	966,497
Fuel oil	.....	.....	.....	.....	1,873,671	964,102
Diesel and gas oil	77,885	11,126	.....	.....	1,046,668	930,746
Gasoline	150,305	21,472	.....	.....	3,983,151	3,960,867
Kerosene	.....	.....	.....	.....	1,066,367	1,008,929
Lubricants	12,133	1,733	.....	.....	146,724	36,979
Other finished oil	4,164	595	.....	.....	7,909	.....
Other unfinished oil	.....	.....	.....	.....	26,278	.....
Coastwise-domestic—						
Fuel oil	.....	.....	218,583	31,226	3,956,351	2,970,519
Diesel and gas oil	.....	.....	.....	.....	349,663	452,462
Gasoline	76,775	10,968	153,530	21,933	4,493,292	3,704,540
Kerosene	.....	.....	.....	.....	114,138	144,204
Lubricants	.....	.....	.....	.....	2,751	.....

der-Petrole and the Mohawk's No. 1 Clendennen has stimulated interest in the Mountain View Field with the result that two new wells have already been spudded in and preparations started to begin drilling operations on several others. The latest spuds in the Mountain View Field are No. 1 Bloemer of the A. T. Jergins Trust and No. 1 McKeehan of the Mohawk Petroleum Co.

The Jergins Trust has foundations in for two additional wells on the Nance and the Wright-Bloemer leases and has staked location for a second project to be drilled on the Bloemer lease in Section 29-30-29. The Hogan Petroleum Co. recently erected a new rig on the Porter-Day lease which the company acquired from the Shell Oil Co. a short time ago, but has not yet installed drilling equipment.

It is the intention to start drilling operations on this well immediately following completion of No. 1 Haley. The Mountain View Field is not expected to upset the production equilibrium in the state as operators in the field are committed to a conservative development program and obligated to conform with curtailment requirements. These obligations are conditional on the part of all operators in new fields or engaged in the exploitation of deeper zones in older fields.

Fruitvale

Tarr & McComb completed No. 1 Roberts in Fruitvale Field of Kern County and this new well was brought in flowing 205 bbls. from 3,780 feet after the hole had been finished with a 6⅝-inch liner, including 251 feet of perforated.

In the Buttonwillow gas field of Kern County the Milham Exploration Co. finished No. 12-8 flowing 14,550,000 feet of gas per day from 2,553 feet. This new well, which was completed with a 6⅝-inch liner, including 207 feet of perforated, was shut in immediately subsequent to completion. General Petroleum has been delayed in No. 1 Barry, a deep test in the South Belridge Field of Kern County, and consequently this deep well will probably not be ready for a production test for another two or three weeks. Due to the hard formation encountered, reaming operations have been relatively slow.

In the North Belridge Field the Union Oil Co. is building rig for No. 18 Belridge, a new well to be drilled in Section 36-27-20. This well will probably be finished in the Temblor although the water string will be sufficiently large enough to permit deepening operations when the underlying Eocene is opened up for development.

The Associated is drilling ahead in No. 1 Williamson in the Lost Hills Field at 6,800 feet and while core samples indicate frequent streaks of oil sand it is not likely that the company will suspend drilling for a production test unless a sufficient thickness is encountered to justify the expectation of developing commercial production.

Two new wells are scheduled for completion for the Mount Poso Field of Kern County within the next week or 10 days and both are expected to result in commercial production. General Petroleum's No. 26 Heisen, bottomed at 1,977 feet and finished with a 6⅝-inch liner, including 52 feet of perforated, should be good for approximately 250 bbls. per day upon completion. Hanneman and associates have completed their No. 1 Glide at 1,968 feet and while a natural flow was not secured, this well should be good for at least 100 bbls. per day on the beam.

Four new wells are scheduled to get under way in the Mount Poso Field within the next two or three weeks, as the General Petroleum is rigging up rotary equipment on No. 10 Glide and the Union Oil Co. is building rigs for Nos. 9 and 10 on the Sarrett & Mack property. The Shell is also making preparations to start a new well in the Mount Poso Field as the company is grading location for a new well to be drilled on the Mathews fee property in Section 4-27-28.

Midway-Sunset

Standard Oil Co. is building rig for No. 61-15-B in the Midway-Sunset Field of Kern County and this new well will probably be spudded in some time before the close of the current month. The Hononlulu has pinched back the production of No. 23 in Section 14-32-24, a recent completion doing 3,900 bbls. per day from 2,898 feet, with the result that this big well is at present producing only 550 bbls. of 26.1 gravity oil and 300,000 feet of gas per day.

The Honolulu recently spudded in No. 15 on the same section and this well should reach completion depth within the next few weeks. Ohio Oil Co., although a formation tester showed a considerable quantity of gas in its Buena Vista Lake wildcat, has not yet concluded drilling

IMPORTANT NORTHERN CALIFORNIA WILDCATS

Company, well and location—	S. T. R.	Depth	Status—
General Pet., No. 9 Capitan, Santa Barbara Co.	32- 5-30	rig	suspended
General Pet., No. 7 Capitan, Santa Barbara Co.	32- 5-30	1,463	prod. test
Shell Oil Co., No. 2 Capitan, Santa Barbara Co.	32- 5-30	....	material
Lincoln Drlg. Co., No. 3 Summerland, Santa Barbara Co.	21- 4-26	2,603	suspended
Dietzman, J., No. 1 Summerland, Santa Barbara Co.	16- 4-26	3,650	rd. sh. drilling
Meganos Oil Co., No. 1 Purisima, Santa Barbara Co.	28- 8-34	3,000	suspended
Barnsdall-Rio Grande, No. 8 Doty Elwood, Santa Barb. Co.	15- 4-29	4,868	redrilling
Signal Oil & Gas Co., No. 2 Elwood, Santa Barbara Co.	tideland	5,016	redrilling
Cuyama Oil Co., No. 1 Cuyama, Santa Barbara Co.	12-10-27	3,950	suspended
Indian Pet., No. 1 Shude, Ventura Co.	tideland	4,150	cleaning out
Woodrow Pet., No. 1 Rincon, Ventura Co.	4- 3-24	7,612	fishing
Hancock Oil Co., No. 1 Fillmore, Ventura Co.	13- 4-19	3,357	recemented
Oil Ridge Oil Co., No. 1 Fillmore, Ventura Co.	1- 4-18	360	sd. sh. drilling
Driggs Pet., No. 1 South Mountain, Ventura Co.	17- 3-20	4,160	sd. sh. drilling
Kneiper & Atha, No. 1 Bardsdale, Ventura Co.	7- 3-19	1,560	hd. sd. drilling
Williamson & Donaher, No. 1 Simi, Ventura Co.	36- 3-18	790	suspended
Dabney, H. R., No. 1 Simi, Ventura Co.	22- 2-18	1,200	suspended
Midlands Pet., No. 1 Ojai, Ventura Co.	9- 3-23	7,830	suspended
Laing & Jacobs, No. 1 Shields, Ventura Co.	32- 4-19	201	suspended
Wilshire Oil Co., No. 1 Sulphur Mountain, Ventura Co.	20- 4-21	2,198	suspended
Kirk, W. A., No. 1 Sulphur Mountain, Ventura Co.	21- 4-21	1,400	br. sh. drilling
Mosher, J. W., No. 1 Santa Paula, Ventura Co.	22- 4-21	1,800	br. sh. drilling
Las Posas Pet., No. 1 Las Posas, Ventura Co.	22- 3-20	5,675	gr. sd. drilling
International Oil Developers, No. 1 Conejo, Ventura Co.	32- 2-20	2,925	hd. sd. drilling
Hub Pet. Co., No. 1 Gould Hills, Kern Co.	22-29-21	6,840	suspended
Shell Oil Co., No. 1 Gould Hills, Kern Co.	21-29-21	mtl.	building rig
Milham Exploration Co., No. 25 Buttonwillow, Kern Co.	8-28-23	2,553	15,000 M gas
Casa Mira Oil Co., No. 1 Belridge, Kern Co.	29-28-20	4,982	suspended
General Pet., No. 1 Belridge, Kern Co.	30-28-21	9,972	cleaning out
Union Oil Co., No. 18 Belridge, Kern Co.	36-27-20	mtl.	building rig
Cumberland Oil Co., No. 2 Devils Den, Kern Co.	17-26-18	3,270	suspended
Hanna, Tom, No. 1 Devils Den, Kern Co.	25-25-18	3,516	suspended
Pyramid Hills Oil Co., No. 1 Devils Den, Kern Co.	24-25-18	4,140	suspended
Fowler, F., No. 1 Blackwell Corner, Kern Co.	15-26-19	3,170	suspended
Associated, No. 1 Lost Hills, Kern Co.	2-26-20	6,800	sd. sh. drilling
Howells Bros., No. 1 Round Mountain, Kern Co.	32-28-29	1,612	sd. sh. drilling
Keno Pet. Co., No. 1 Lerdo, Kern Co.	14-29-27	4,531	suspended
Carribou Record Oil Co., No. 1 Kern Front, Kern Co.	11-28-27	501	sd. drilling
Bankline Oil Co., No. 1 Kern Front, Kern Co.	28-28-27	1,901	sd. sh. drilling
Shafter Oil Co., No. 1 Shafter, Kern Co.	8-28-25	mtl.	building rig
Ohio Oil Co., No. 1 Buena Vista Lake, Kern Co.	31-31-26	4,400	sd. sh. drilling
Union Oil Co., No. 1 Union Avenue, Kern Co.	15-30-28	5,647	recemented
Alta Oil Co., No. 1 Union Avenue, Kern Co.	6-30-28	5,400	sd. sh. drilling
Hogan Pet. Co., No. 1 Shell Mountain View, Kern Co.	29-30-29	5,910	suspended
Hogan Pet. Co., No. 2 Shell Mountain View, Kern Co.	29-30-29	5,863	suspended
Hogan Pet. Co., No. 3 Shell Mountain View, Kern Co.	29-30-29	mtl.	building rig
Hogan Pet. Co., No. 3 Mountain View, Kern Co.	29-30-29	4,801	sd. sh. drilling
Bankline Oil Co., No. 1 Mountain View, Kern Co.	4-31-29	6,088	to abandon
Barnsdall Oil Co., No. 1 Mountain View, Kern Co.	31-30-29	6,444	suspended
Labadie, E. L., No. 1 Mountain View, Kern Co.	29-30-29	3,801	sd. sh. drilling
Mohawk Pet., No. 4 Mountain View, Kern Co.	30-30-29	5,163	sd. sh. drilling
Comanche Oil Co., No. 1 Comanche, Kern Co.	15-32-29	1,400	sd. sh. drilling
Badger Oil Co., No. 1 Wheeler Ridge, Kern Co.	31-11-19	4,976	suspended
Gatton & Luethe, No. 1 Madera, Madera Co.	32-10-17	3,020	suspended
Russ Oil Synd., No. 1 Kingsburg, Fresno Co.	20-12-11	3,900	plugging back
Bergman, Harry, No. 1 Kingsburg, Fresno Co.	12-12-11	4,279	cleaning out
Graham & Loftus, No. 1 Raisin City, Fresno Co.	20-15-18	5,906	suspended
Emerich Oil Co., No. 1 Mendota, Fresno Co.	35-13-13	3,850	sd. sh. drilling
Western Gulf, No. 1 S. P., Fresno Co.	3-17-15	7,602	sd. sh. drilling
Hogan Pet. Co., No. 1 Joaquin Ridge, Fresno Co.	28-20-16	6,605	suspended
Superior Oil Co., No. 1 Jacalitos, Fresno Co.	6-22-16	7,771	sd. sh. drilling
Kent & McDonald, No. 1 Carrizo Plains, S. Luis Obispo Co.	3-22-22	3,830	suspended
Farrel Pet., well No. 1, San Luis Obispo Co.	18-31-12	1,095	cleaning out
Willet Oil Co., No. 1 Cholame, San Luis Obispo Co.	10-25-15	rig	rigged up
Guess, E. B., No. 1 Corcoran, Kings Co.	7-21-21	6,197	suspended
Knudsen & Schmidt, No. 1 Reef Ridge, Kings Co.	36-23-17	6,873	suspended
Magee & Stone, No. 2 Alpaugh, Kings Co.	33-21-22	3,149	suspended
Douglas, J. M., well No. 1, Monterey Co.	36-22- 9	278	sd. drilling
Na-Pa Oil Co., No. 1 Griffith, Napa Co.	7- 8- 3	3,750	suspended
Oakdale Oil Co., No. 1 Oakdale, Stanislaus Co.	5- 2-10	4,760	hd. sh. drilling
Pacific Northern Oil Co., No. 1 Guinda, Yolo County	22-12- 3	5,440	hd. sd. drilling
Buttes Oilfields Co., No. 1 Marysville, Sutter Co.	35-16- 1	2,731	gas—shut in
Buttes Oilfields Co., No. 2 Marysville, Sutter Co.	35-16- 1	4,136	hd. sd. drilling
Tehama Pet. Co., well No. 1, Glenn Co.	4-22- 5	4,696	redrilling

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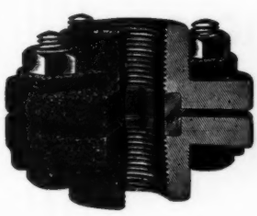

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operations due to the apparent absence of a sufficient thickness of oil sand to justify the expectation of commercial production. The Shell Oil Co. has just about completed rig construction for No. 1 Premier, a wildcat to be drilled in the Gould Hills district of Kern County, and rotary drilling equipment is expected to be moved in some time during the forthcoming week.

Ventura Avenue

Bolsa Chica Oil Co. conducted a production test on No. 5 Hartman in the Ventura Avenue Field after plugging back the hole from 7,527 feet to 7,398 feet, but the well failed to come up to expectations as it showed a rather high water cut. The well showed plenty of gas pressure but with the output cutting approximately 50 per cent the well cannot be considered as a commercial producer at the present time.

General Petroleum's No. 15-A Barnard, a deep test in the Ventura Avenue Field, bottomed at 9,000 feet but plugged back by stages to 8,537 feet, failed to show clean commercial production on a production test finished during the early part of the week. This well was returned to production flowing 2,549 bbls. of 23.5 gravity oil cutting 30 per cent. It was killed immediately subsequent to completion, notwithstanding a casing pressure of 1,260 pounds and will be plugged back for further work.

The Associated has three wells rotating in the oil sand in the Ventura Avenue Field at present and one of these projects, No. 133 Lloyd, should be finished in the near future. Shell Oil Co. is also expected to chalk up a new completion in the Ventura Avenue Field in the near future, as No. 77 Taylor is rotating in the oil sand.

IMPORTANT SOUTHERN CALIFORNIA WILDCATS

Company, well and location—	S.	T.	R.	Depth	Status—
Palm Ridge Oil Co., No. 1 Palms, Los Angeles Co.	2-	2-	15	7,150	suspended
Clayton, G. L., No. 1 Clearwater, Los Angeles Co.	31-	3-	12	1,133	suspended
Pacific Gulf, No. 1 Athens, Los Angeles Co.	19-	3-	13	6,034	suspended
Pacific Dev. Co., No. 1 Wilmington, Los Angeles Co.	16-	3-	13	3,902	suspended
Mutual Oil Co., No. 1 Dominguez, Los Angeles Co.	3-	4-	13	309	sd. sh. drilling
Kelly & Son, No. 1 Torrance, Los Angeles Co.	7-	4-	13	5,190	sd. sh. drilling
Wehrman, J. K., No. 1 San Pedro, Los Angeles Co.	14-	5-	14	1,194	schist
Nudson, T. T., No. 1 Inglewood, Los Angeles Co.	31-	2-	14	rig	rigged up
Nudson, T. T., No. 1 Inglewood, Los Angeles Co.	31-	2-	12	4,940	suspended
Celito Oil Co., No. 1 Monterey Park, Los Angeles Co.	25-	1-	12	5,319	suspended
Community Oil Co., No. 1 Montebello, Los Angeles Co.	34-	1-	11	5,490	fishing
Universal Consd., No. 2 Montebello, Los Angeles Co.	5-	2-	11	5,315	sd. sh. drilling
Universal Consd., No. 3 Montebello, Los Angeles Co.	5-	2-	11	5,303	sd. sh. drilling
Texas Co., No. 1 Montebello, Los Angeles Co.	6-	2-	11	316	sd. drilling
Midfield Oil Co., No. 1 Pico, Los Angeles Co.	19-	2-	11	2,016	cemented
Kyle, W. S., No. 1 Pico, Los Angeles Co.	7-	2-	11	....	material
Rex Anglin Dev. Co., No. 1 Los Nietos, Los Angeles Co.	29-	2-	11	rig	suspended
Signal Pet., No. 1 Puente, Los Angeles Co.	14-	2-	10	4,908	suspended
Eldorado Pet., No. 1 Puente, Los Angeles Co.	30-	2-	9	2,890	hd. sd. drilling
Recovery Oil Co., No. 1 Sunset Beach, Los Angeles Co.	16-	5-	11	3,400	suspended
Superior Oil Co., No. 1 Sunset Beach, Los Angeles Co.	19-	5-	11	mtl.	building rig
Barstow Oil Co., No. 1 Saugus, Los Angeles Co.	35-	5-	16	2,136	cleaning out
Alpha Oil Co., No. 1 Calabasas, Los Angeles Co.	22-	1-	18	1,317	suspended
Marble, Willard, No. 1 Van Nuys, Los Angeles Co.	6-	2-	16	2,760	suspended
Black Eagle Oil Co., No. 1 Huntington, Orange Co.	tideland			2,450	hd. sd. drilling
Nuoil Oil Co., No. 1 Newport, Orange Co.	29-	6-	10	5,309	sd. sh. drilling
Tehama Pet., No. 1 Santa Ana Canyon, Orange Co.	33-	2-	8	297	sd. drilling
Placentia Dev. Co., No. 1 Placentia, Orange Co.	31-	3-	9	3,700	hd. sh. drilling
Rubens, Sy., No. 1 Atwood, Orange Co.	19-	3-	9	3,368	prod. test.
Bardeen Pet., No. 1 Coyote, Orange Co.	13-	3-	10	1,512	hd. sd. drilling
Bartholomae Oil Co., No. 1 Coyote, Orange Co.	22-	3-	10	3,246	cemented
Spindle Top Oil Co., No. 1 Salton Sea, Riverside Co.	25-	7-	10	3,590	suspended
Great American Pet., No. 1 Chino, San Bernardino Co.	18-	2-	8	2,645	fish for D/P
Great American Pet., No. 2 Chino, San Bernardino Co.	18-	2-	8	2,600	br. sh. drilling
McCarthy, C. F., No. 1 Chino, San Bernardino Co.	14-	3-	6	803	suspended
Edmonds, E. A., well No. 1, San Diego Co.	29-	15-	3	649	suspended

Goleta Gas Field

General Petroleum has opened up its three wells on the More ranch in the Goleta gas field of Santa Barbara County and this trio of producers is yielding a little in excess of 14,000,000 feet of gas per day. None of the wells in question are producing up to the maximum. The Standard has not yet opened up its gas well in the Goleta gas field, but may do so if climatic conditions justify.

The winter up to the present has been relatively warm and consequently the demand for natural gas is somewhat below expectations. It is believed quite probable, however, that the temperature will show a decline within the next few weeks and a corresponding increase reflected in the demand for natural gas. If the variation in temperature becomes sufficient, we may anticipate increased production of natural gas in the Kettleman Hills, Ventura Avenue and Goleta gas field.

Indian Petroleum Corp. has been experiencing difficulty in finishing a commercial producer on tideland permit No. 82 in the Rincon Field of Ventura County and may possibly resume drilling operations in the near future. This well has been tested out by stages and is now standing plugged back from 4,150 feet to 3,450 feet. The company has made several production tests on the way down but has not succeeded in getting commercial production. The well in question is located on a specially constructed island located approximately 4,000 feet out beyond the tide line in the Rincon Field and about 2,000 feet out beyond the General Petroleum's wharf.

In the San Miguelito Field of Ventura County, Chanslor-Canfield Midway Oil Co. has just started swabbing operations on No. 2-A Hobson after cleaning out the hole to bottom. This well, the first pioneering project to be drilled in the San Miguelito Field, was carried down to 10,030 feet during the course of the work, but was plugged back to 7,825 feet after the bit had drilled through the fault on the northern end of the field and registered a downward displacement of approximately 4,000 feet. Chanslor-Canfield Midway Oil Co.'s No. 2-A, due to its deviation from the vertical, never passed out of the upper Grubb zone. It penetrated most of this zone south of the fault and then, due to a downward displacement north of the fault, again encountered the upper Grubb zone after drilling through the fault.

Continental Oil Co. is producing both of its two wells in the San Miguelito Field, although current production represents only a part of their aggregate potential. Continental's wells in the San Miguelito Field are capable of producing approximately 3,500 bbls. per day but due to curtailment, the company has restricted their aggregate production to 1,071 bbls. daily. Union Oil Co., which has been conducting a reconditioning program in the Santa Maria Field for the past several years, recompleted No. 8 Newlove in the Santa Maria Field pumping 125 bbls. of 28.1 gravity oil per day.

Kansas Fields

(Continued from Page 51)

pleted. It is a 10-bbl. pumper at 2,675-85 feet.

Pyle & Sutter plugged back from 3,382 feet to 2,730 feet in No. 1 Fitch, SW NW SE SW Section 6-26-1e, but had a fishing job that proved hopeless and abandoned the test.

In Towanda Pool

Gypsy Oil Co.'s first Kansas City lime test on the Ladd farm, C NE NE SW Section 11-26-4, in the Towanda Pool, Butler County, set 8-inch casing at 1,267 feet; had a show of gas at 1,385 feet and a showing of water at 1,490 feet. Six-inch pipe was set at 1,630 feet. Kansas City lime was found at 1,917-61 feet with a showing of oil. It will be acidized.

Greenwood County

In Greenwood County DeGenther and others have machine in to drill a wildcat test, No. 1 Garrison, SW NE NW Section 20-25-11.

Mendenhall Oil Co.'s No. 3 Hollister, SE cor. Section 5-25-13, was dry and abandoned at 1,596 feet. Same company has machine in for No. 1 Johnson, NE cor. Section 8-25-13, on a four-acre tract.

Cross & Field have abandoned the location for No. 3 Mason, C E half, NW SW Section 14-25-13. Anderson & Pence have abandoned location for No. 2 Aldens, SW Section 17-24-13.

Phillips Petroleum Co. was drilling at 345 feet in No. 5 Jones, CWL NE SE NW Section 36-24-10. Dwyer and others were spudding No. 1 Wolf, SW SE NW Section 4-24-14. Oko Oil Co. was drilling at 450 feet in No. 4 Winterschied, SE NE NE SW Section 6-24-14.

Ward McGinnis' No. 2 O'Neal, NE SE SE Section 29-23-11, was dry and abandoned at 2,030 feet. Neither sand nor lime was found in this test.

York State Oil Co. completed No. 16 Westcott, NE NW SW Section 33-22-11, a 30-bbl. pumper at 1,961-90 feet.

Stafford County

Stanolind Oil & Gas Co.'s No. 2 Richardson, SE NE SE Section 36-22-12w, Stafford County, was a hole full of water from Siliceous lime at 3,658-86 feet and was abandoned.

P. H. Bohart Is Appointed Vice President of Gypsy

P. H. Bohart, formerly general agent of the Mexican Gulf Oil Co. in Mexico, has arrived in Tulsa to become vice president and assistant general manager of the Gypsy Oil Co. and Gulf Pipe Line Co. of Oklahoma. He will be the principal assistant to Rush Greenslade, vice president and general manager of the two companies.

A native of Fort Worth, Tex., Mr. Bohart completed his training as a geologist and engineer at the Missouri School of Mines at Rolla, and following a year's service with the Gulf Production Co. in Texas, was sent to Tampico, Mexico, where he spent 14 years with the Mexican Gulf.

H. J. RAYMOND DIES

Herbert J. Raymond, 44, foreman of the telephone and telegraph department of the Texas Pipe Line Co. of Oklahoma, died last week at a Tulsa hospital of pneumonia. After service with the old Pioneer Telephone Co., Raymond joined the Texas Co. May 27, 1914, and except for six months in the army, has been with that firm since. He became foreman January 1, 1919.

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Several Tests Abandoned in Rocky Mountains; Craig Dome Test Completed as Gas Well

By TOLBERT R. INGRAM
Staff Correspondent, Rocky Mountain Area

DENVER, Colo., Jan. 8.—Humble Oil & Refining Co.'s No. 3-A Lindley, in the Jal Pool, New Mexico, is flowing and swabbing 500 bbls. of oil and an equal quantity of water per day after plugging back. The Western-Anton No. 1 Conditt gas well has been killed after blowing nearly three months. The Western Drilling Co.'s No. 2-A Green, in Eddy County, was abandoned. Mountain Fuel Supply Co.'s No. 1 Hatch, in Moffat County, Colorado, was abandoned, and the Rocky Mountain Gas Co.'s No. 2 Bogenschultz, on the Craig Dome, is being completed as a gas well. A wildcat in Boulder County is showing some noninflammable gas.

In Wyoming the Harold Nutting test on the Buck Springs structure in Carbon County, is showing for a small well in the Wall Creek sand at 890 feet. There were no completions or new locations.

Most of the wells in the Cut Bank Field in Montana were shut down on account of the blizzard and there were no completions.

NEW MEXICO

Lea County

Humble Oil & Refining Co.'s No. 3-A Lindley, C NW SW Section 13-25-36, Jal area, a south offset to Continental Oil Co.'s No. 1-B Sholes, one of the largest producers completed in that field, is flowing and swabbing 500 bbls. of oil and 500 bbls. of water per day after plugging back from 3,510 feet to 3,359 feet. The 7-inch was ripped to 3,258 feet. It made 6,000 bbls. of sulphur water per day at 3,510 feet. Continental's No. 1 Sholes, on the north, made 2,280 bbls. of oil and 40,000,000 feet of gas initial at 3,370 feet.

Western-Anton's No. 1 Conditt, C SW SW Section 12-25-36, has succeeded in killing the gas, estimated at 50,000,000 feet per day, and plans to core 10 to 20 feet deeper and run the 4¾-inch and cement. Total depth is 3,349 feet. The well reached present depth nearly three months ago when it blew out between casings. After overcoming various difficulties, 2½-inch tubing finally was landed on bottom last week and the gas killed.

Southern Petroleum Exploration Co.'s No. 1 Ascarate, C NE NW Section 24-25-36, Jal area, is drilling at 3,096 feet in lime.

Texas Co.'s No. 1 Lea, SW cor. NW Section 14-20-34, in the Pearl district, is building road to location, and its No. 2-B Lynch, C SE SW Section 27-20-34, Lea area, is standing with rig completed. Its No. 4-A State, C Lot 7, Section 2-21-33, topped anhydrite at 1,705 feet and is drilling in that formation at 1,710 feet.

Gypsy Oil Co.'s No. 1 La Munyon, C NE NE Section 28-23-37, Cooper area, is running 20-inch at a total depth of 105 feet. It is bottomed in sand.

Eddy County

Western Drilling Co.'s No. 2-A Green, C SW NE Section 29-17-29, Jackson area, drilled deeper for oil, was abandoned at 2,840 feet. It made only 2 bbls. per day after a shot. Flynn, Welch & Yates' No. 67 State, C SW NW Section 10-19-28, Artesia area, is drilling at 1,720 feet in anhydrite. Ralph Spearow and others' No. 1 McClelland, SW NW NE Section 22-22-23, Indian Creek, is drilling at 4,662 feet in black lime and shale.

Chaves County

George Etz and others' No. 1 Etz, C SE NE Section 14-8s-26, Railroad Mountain district, 24 miles northeast of Roswell, is shut down in white lime at 1,868 feet. It had a show of oil and gas at 1,806-24 feet and at 1,834-44 feet it made three bailersful of sulphur water in 12 hours.

COLORADO

Moffat County

Rocky Mountain Gas Co.'s No. 2 Bogenschultz, SE cor. Section 9-6n-91, Craig Dome, had one bailerful per hour of water at 2,750-52 feet and ran and cemented liner. It then cut a sand at 2,750-52 feet which gauged 1,580,000 feet of gas with a pressure of 900 pounds in 24 hours. Drilling then was resumed to the next sand. This well is 445 feet southeast of No. 1 Bogenschultz, the discovery well, which had gas sands at 2,732-46, 2,781-02 and 2,807 feet. The last sand was barely scratched and produced most of 11,000,000 feet initial flow.

Mountain Fuel Supply Co.'s No. 1 Hatch, SE NW SW Section 9-11n-101, Sugarloaf district, southwest of the Hiawatha Dome, has been abandoned at 3,519 feet. It reached this depth last summer and shut down for a heavier rig. However, upon failure of the deep test on Hiawatha in its No. 2 Florence Wilson, to find anything worth while in the deeper horizons, it was decided not to go any deeper. It had several shows of oil and gas in the upper horizons, but none below 1,500 feet and it was believed to be too close to a fault.

Stanolind Oil & Gas Co.'s No. 21-X, NE SW NW Section 23-4n-92, Iles Dome, cemented the 13¾-inch at 91 feet and is drilling at 990 feet, and Texas Co.'s No. 5 Parkinson, NW cor. Lot 13, Section 23-4n-92, is drilling at 2,265 feet in shale and shells.

Huerfano County

S. W. Pressey's No. 1 Ojo, SW NE Section 10-29-69, Oak View district, is making hole below 2,300 feet.

Park County

South Park Oil Co.'s No. 1 Milligan, NE cor. SE Section 13-8s-76, Jefferson district, is drilling at 3,154 feet in very hard sand showing traces of saturation. It topped the formation at 3,128 feet.

Boulder County

Consolidated Smelting & Metals Co.'s No. 1 Blubaugh, SE cor. Section 20-3n-70, Lyons district, is drilling at 1,200 feet inside 3-inch pipe and making slow progress on account of the size of the bit and depth. It is making some gas that is noninflammable and has no odor. Gas has not been gauged.

WYOMING

Carbon County

Petroleum Exploration Co. of California's No. 2, SW Section 29-23-88, Buck Springs district (Harold Nutting and others) is drilling at 890 feet at which depth it had a good show of oil in the second Wall Creek sand, estimated at 5 to 25 bbls. per day. It also showed for 150,000 feet of gas per day in the first sand at 850 feet. It is planned to run pipe and test the show and if not commercial, contine lower. A test drilled in the NW SE Section 29 several years ago by Producers & Refiners Corp. had water in the Wall Creek.

Earl W. Reeder, Inc.'s No. 1 Union Pacific, C SW SW Section 19-20-83, Overland Dome, has lowered 6⅝-inch to 3,380 feet and is cleaning out to land it on bottom at 3,735 feet. While the string is below the most troublesome cavey ground, cleaning out is slow on account of the mud run while 8¼-inch was being cemented which congealed almost to the consistency of rubber.

Ohio Oil Co.'s No. 1 A. J. Hazlett, NE NW Section 34-23-79, Allen Lake Dome, is fishing for drill stem at 2,800 feet.

Lincoln County

H. C. Harris and others' No. 1, C NW SE Section 14-21-117, Fossil district, is shut down at 1,680 feet.

Big Horn County

Taylor Oil Co.'s No. 1 Island, Lot 5, Section 25-56-97, Byron district, is drilling at 2,320 feet with a show of gas after cementing 12½-inch at 2,176 feet. This is approximately the depth at which the Frontier is expected.

Hot Springs County

Empire State Oil Co.'s No. 4 Republic, NE cor. NW Section 14-44-98, Hamilton Dome, has resumed after setting 6⅝-inch at 2,785 feet.

Niobrara County

Ed Shogren and others' No. 1 Olinger, NE NW Section 1-36-63, Old Woman Creek, topped the Niobrara at approximately 575 feet and is drilling at 630 feet.

Goshen County

Joyce Hardy and others' No. 1 Peterson, SW cor. Section 21-22-63, Goshen Hole district, is rigging up.

MONTANA

Glacier County

A blizzard, zero weather, frozen water lines and the holidays all contributed to the closing down of most all drilling wells in the Cut Bank Field. Among the few remaining active are Texas Co.'s No. 1 State, C NE Section 16-32-5w, South Cut Bank, is fishing for tools at 2,815 feet, total depth, and its No. 1 Purdy, SE cor. SW Section 35-35-6w, is fishing for bit at 1,633 feet. Same company's No. 1 Haggerty, SE cor. Section 9-34-6w, is drilling at 2,490 feet.

Carbon County

Carbon Oil & Gas Co.'s No. 1 Armstrong, SW cor. NW Section 7-7s-22, Dry Creek Dome, is redrilling at 5,605 feet after plugging back. Old depth was 5,710 feet.

Liberty County

Western Natural Gas Co.'s No. 1 Shaffer, SW cor. SE Section 14-37-4e, Whitlash district, is shut down at 2,090 feet in the upper Ellis after cementing pipe.

Toole County

Alberta Development Co.'s No. 3 Buckley, NE SE SW Section 1-37-4w, Border Field, is shut down at 2,390 feet.

Teton County

R. C. Tarrant's No. 1 Porter, SE cor. NE Section 35-27-5w, Pendroy district, is running casing at 1,800 feet.

Canadian Oil Production Increasing But Decline in the Natural Gas Output

By VICTOR LAURISTON
Staff Correspondent, Canadian Fields

CHATHAM, Ontario, Jan. 6.—Official preliminary estimates of Canadian petroleum production for 1933 indicate a total output of 1,126,100 bbls., a 7.8 per cent increase over 1932 production of 1,044,412 bbls. In New Brunswick the total is estimated at 9,100 bbls., a gain of 42 per cent. Ontario's output rose 5.1 per cent to 137,000 bbls. Alberta output increased 8 per cent to 980,000 bbls. Natural gas production for 1933, estimated at 22,918,600,000 feet, represents a 2.1 per cent decline from 1932. Ontario's production declined to 6,900,000,000 feet. Alberta wells produced 15,426,000,000 feet, a gain of .4 per cent. New Brunswick output, at 592,000,000 feet, was 10.6 per cent below.

Alberta production for November showed a small gain, 96,358 bbls. against 94,526 bbls. in October. The gain was in the Turner Valley Field, where naphtha output increased from 90,189 bbls. to 90,657 bbls., and light crude from 1,941 to 3,446 bbls. Red Coulee-Keho was down from 2,047 to 1,915 bbls. and Wainwright heavy crude from 349 to 340 bbls. Handling losses from Turner Valley production as recovered at the well head amounted to 3.7 per cent. Some 1,858 bbls. increase in storage brought total storage to 14,668 bbls. November 30.

Sterling Pacific Deal Mooted

Shareholders of Sterling Pacific Oil Co. will meet at Vancouver on February 8 to consider an offer from Royalite Oil Co. for the purchase of their holdings in Turner Valley. The consideration is 37,000 shares of Royalite stock. Sterling Pacific Oil Co. owns the whole of Section 33-18-2w5. Its No. 1 is a fair producer and No. 2 has been one of the best wells in the field, while Sterling Royalties' No. 1 is probably the largest producer in Turner Valley, making around 400 bbls. a day. All the wells are crude naphtha producers from the Madison lime.

Sterling Pacific Oil Co. was organized seven or eight years ago at Vancouver, and operations have been carried on in fairly close association with Imperial Oil, Ltd. J. W. R. McLeod is managing director, and the directorate includes W. J. Blake-Wilson, A. M. Donaldson, G. Roy

(Continued on Next Page)

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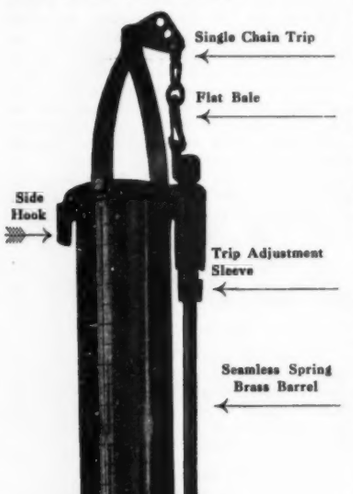

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Canadian Fields

(Continued from Preceding Page)

Long, A. C. Taylor, Neil McQueen, B. M. McIntyre, J. M. Trumbull and F. A. Stevenson. The company's acreage is immediately north of Section 28 and south and east of Section 5-19-2w5, where Miracle Oils' No. 2 recently encountered crude oil in the Madison. Unlike other prolific sections, Section 33 has not been extensively drilled, only the three wells, all productive, having been put down.

Mar-Jon Section

In Section 28-18-2w5, Becker Syndicate's No. 2 Anaconda, LSD 15, is reported making hole slowly below 5,410 feet more than 300 feet in the lime. Mar-Jon Oil Co.'s No. 2 Kindersley, LSD 10, rotary test, is below 4,700 feet after a casing job. Spooner Oils' No. 5 Anaconda, LSD 1, is below 2,680 feet. Pacalta Oils' No. 1 LSD 7, same section, is below 3,315 feet. Publix Oil & Gas Co.'s No. 1, LSD 8, will resume this month at 1,300 feet.

South Turner Valley

North West Co.'s No. 2 Calgary & Edmonton-Longview, LSD 5, Section 27-18-2w5, is below 3,114 feet. It is the most easterly test drilling in Turner Valley, and the only drilling activity of Imperial Oil, Ltd. Associated Royalties' No. 1 Spray, LSD 9, Section 5-19-2w5, is making new hole from 3,250 feet.

Far South Tests

In the far south end, Union Drilling Co.'s No. 1, LSD 8, Section 21-18-2w5, is resuming at 2,758 feet. A little farther north Highwood-Sarcee Oils' No. 1, LSD 16, Section 21-18-2w5, encountered a fair show of light crude at the Blairmore contact. Potential production is estimated at 12 bbls. a day. This is the first time such oil shows have been met south of the Longview hill.

Director Royalties, Ltd.'s No. 1 test in LSD 16, Section 28-18-2w5, will be started as soon as weather moderates.

Central Turner Valley

In Central Turner Valley, Dome Oils' No. 2, LSD 16, Section 36-19-3w5, which has been taking a small naphtha production from the Madison lime at 5,612 feet, will plug back for a test of the Dalhousie sand.

Oil City Test

In the southern foothills, Oil City Royalties' No. 1 Patrick, Section 30-1-30w4, is shut down at 1,778 feet owing to heavy snow. On the Pekisko structure, south of Turner Valley, Pekisko Hills Co.'s No. 1, LSD 6, Section 6-17-2w5, is waiting for equipment to complete rigging up.

Moose Mountain Test

On the Moose Mountain structure west of Calgary, Elbow Oils' No. 1, LSD 11, Section 35-22-5w5, is making new hole below 3,645 feet.

Aldersyde Deep Test

On the Aldersyde structure, west of Turner Valley, Ranchmen's Gas & Oil Co.'s No. 1, LSD 16, Section 13-20-29w4, is reported below 6,100 feet, a new depth record for Alberta areas outside the foothill belt. The test has been drilling intermittently for seven years or more and has encountered numerous small shows of gas and oil. Operations were resumed in 1933 after a shut down. The hole was recently cleared of tools and the drill is again going down with an appreciable increase in the gas flow. The location is a considerable distance due east of the north-central section of Turner Valley. Drilling got the top of the Benton shale, the outcropping formation, at around 4,300 feet. A. P. Phillips is in charge of the drilling.

Border Fields

In the border area of southern Alberta, Rialto Oils' No. 1, LSD 4, Section 15-1-9w5, is shut down at 2,550 feet after cementing casing.

On the Twin River structure south of Lethbridge, Nordon-Roney's No. 2 Twin River, LSD 11, Section 2-2-20w4, is shut down owing to weather. C. A. Roney of Los Angeles, who has been in charge of the work, is recovering from a broken rib.

Saskatchewan Gas Test

In western Saskatchewan, Lloydminster Gas Co.'s No. 1, about three-quarters of a mile from Lloydminster, has encountered a fair show of gas at 1,140 feet. Larger production is anticipated between 1,500 and 1,600 feet.

Petrolia Operations

The reported strike of shallow oil by the Leo A. Wilson syndicate in Brooke Township has drawn attention again to the Petrolia Field. The new strike may represent an extension toward the east. The Petrolia Field was first opened about 1860. In recent years many of the old, run-down oil properties have been taken over by Canadian drillers who, owing to lack of employment in foreign fields, have returned to Petrolia. These experienced men have refitted and reconditioned their producing wells and pumping equipment and introduced more exact and scientific methods with the result that production has been generally increased. Various methods have been introduced to increase the flow of oil. Many of the old nonproducing wells have been plugged off, and the producing wells cleaned out and recased, and storage tanks have been brought nearer the wells. The speeds of pumps have been carefully studied to secure the maximum crude oil production.

There have also been attempts to increase production by acid treatment of the lime rock. Some wells showed negative results while with others there was a considerable initial increase in production. New methods may be worked out to suit Petrolia conditions.

Drilling operations have been practically at a standstill for 20 years, though a few isolated wells have been put down. Rotary drilling has never been tried in the Petrolia Field. It was here that the Canadian pole-tool system was evolved, the black ash drilling rods of early days being later replaced by metal rods. In recent years cable tools have been generally used.

Aldborough Dry Hole

In Elgin County, Ontario, Union Gas Co.'s No. 1 Aldborough, Lot D, Concession 10, Aldborough Township, has been completed at 2,160 feet without a show. The test was carried through the Clinton into the "big red" shales. It was started on the strength of small gas shows encountered in two wells drilled by the Vacuum Gas & Oil Co. of Toronto near Clearville, in Orford Township, Kent County. The Clearville wells both encountered shows in a horizon approximating the Tilbury sand, and the Union wildcat, a short distance north and east, at the start looked promising, logging somewhat higher.

Dawn Drilling

In the Dawn Field, Lambton County, Union Gas Co.'s No. 70, Lot 24, Concession 1, Dawn Township, is drilling at 2,140 feet without a show and is expected to finish dry around 2,150 feet. Location was 2,500 feet west of Union's No. 59, which was a large producer. Union's No. 4 has finished deepening with no increase in gas production. Nos. 13 and 18 were previously drilled deeper, but only No. 13 got additional production. No further drilling will be undertaken in the Dawn Field until spring.

New Wildcat

North and west of the Dawn Field, an interesting wildcat has been started by S. S. Reesman of Tulsa, associated with Chatham interests. Location is on the Kerr farm, Lot 21, Concession 1, Moore Township, north of Wilkesport. A test was drilled on this location 10 years ago but was pulled and plugged. The new location is about 20 feet south. The starting of the test presented some unusual drilling stunts. Study of logs of previous wells in the same area showed that much difficulty had been experienced with a thick overburden of blue fire clay. Spudding through this substance had proven a tedious, difficult and expensive process. The clay is practically impervious to water, which was rather difficult to secure, and any attempt to drill through the clay gummed the tools.

To meet these peculiar conditions, Canadian pole tool equipment was secured and an "augur" used to bore out the clay. This method was worked out by the head driller, James "Scotty" Miller, whose experience ranges from Peru to Fort Norman. A wooden stake about 6 feet long was attached transversely to the metal drill rod, a horse hitched to the stake, and driven around in a circle to turn the augur. After about 3 feet of hole was made, the rods were pulled and the augur lifted and cleaned out, after which the boring was resumed. While the frequent pulling of the rods would seem a time-consuming process, actually the boring through the clay bed took less than two days, much less than would have been required by any other process. Mr. Reesman, who has had extensive experience in many oil fields, stated it was the first time he had ever seen this method employed, or a horse used for the purpose.

The test got hardpan at about 150 feet and is drilling through this with 12½-inch bit after which 10-inch pipe will be carried to bedrock, around 195 feet.

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Broomfield Gas Pool Extended Half Mile North; Three Oil Producers Completed in Michigan

By PAUL A. ELLIOTT
Staff Correspondent, Michigan Fields

MUSKEGON, Mich., Jan. 6.—An extension of the Broomfield Township, Isabella County, gas pool and completion of three oil wells, two in the Porter Township Pool and one in Greendale Township, all Midland County, aggregating about 1,600 bbls. of new production, summarizes the week in Michigan.

D. F. Jones' No. 1 Archie P. and Lillian Wonser well, W half NW NE Section 2-14n-6w, came in as a half mile northward extension of the Broomfield Township gas pool, one of the two largest Michigan series gas pools. It had an initial open flow capacity of 1,500,000 feet a day with possibilities of an increase with slightly deeper drilling. The well is half a mile north of R. D. Malcolm's No. 1 Cook, brought in several weeks ago as an earlier north extension in which 19 gas producers now have been completed for an aggregate open flow of more than 50,000,000 feet a day.

Two of the three new oil producers were completed in Section 21-13n-1w, Porter Township, Midland County, Edward Stewart's No. 3 Henry Carter, SE NW NE Section 21, flowed 25 to 30 bbls. an hour for an estimated initial of 600 bbls. a day. Dundee limestone was topped at 3,350 feet with pay sands at 3,402 feet. Davis Oil Co.'s No. 4 Neitzke, NE NW NW Section 21, topped the Dundee at 3,364 feet and flowed at the rate of about 400 bbls. daily. W. L. McClanahan's No. 1 Mae Speerbecker, NW SW NW Section 13-14n-2w, Greendale Township, made about 30 bbls. an hour in the Dundee as a new East Pool producer. Another 250 bbls. of new production was added by acid treatment of C. W. Teater's No. 1 J. M. Wale in Section 22, Porter Township, when it came up from 150 to 400 bbls. a day in the Dundee.

Seven other wells in Central Michigan oil areas are nearing completion in the Dundee as follows: Pure Oil Co.'s No. 3-A Yost, Section 35, Greendale Township, and No. 4 Howard, Section 17, Porter Township; George Hanner's No. 3 George Hathaway, Section 17, Porter Township, which has been shut down on top of the Dundee; McClanahan Oil Co.'s No. 3 Hathaway, also Section 17, and Stork Oil Co.'s No. 2 Hill, Section 22, Porter Township.

Taggart Brothers' No. 4 Robert S. Fish, in Section 4, Austin Township, Mecosta County, a prospective mile north extension in this new gas pool, is expected to be drilled in next week. It is located C SE NE Section 4-14n-9w, Austin Township, nearly a mile due north of No. 3 Fish, which came in several weeks ago as the State's largest dry gasser at 27,500,000 feet a day.

Another possible new gasser in the Michigan series in a wildcat area nearing completion is V. M. Voorhees' No. 1 Smith in Section 30-16n-3w, Wise Township, Isabella County, expected to hit the gas pay at about 1,350 feet.

Saginaw County

Hayden and Townsend's No. 1 Patrick Foy, NW NW NW Section 16-12n-2e, Richland Township, Saginaw County, a wildcat about 10 miles southeast of the Porter Pool, also was nearing completion in the Dundee. A second test in this section, Alex Jeffrey's No. 1 John Hubbell, NE NE SE Section 7-11n-2e, Fremont Township, Saginaw County, also is drilling in the Traverse with prospects of early completion to the Dundee.

Montcalm County

W. J. Wilson, trustee's No. 1 Beach, NE NE SW Section 17-12n-5w, Richland Township, Montcalm County, has set casing before drilling into the Michigan gas series at about 1,300 feet.

Osceola County

Sun Oil Co.'s No. 1 William O. Flemming, NE SE NW Section 5-17n-8w, Evart Township, Osceola County, had a show of gas in the Michigan series but not in commercial quantities, so it is being carried deeper.

Ogemaw County

Several new tests were preparing to start drilling in Ogemaw County, where a new pool is opening.

New Permits

Fourteen new permits, seven of them for new locations in two Ogemaw County townships, have been issued: W. Hunter Atha's No. 1 Ed Hutchins, SE NW SE Section 18-22n-2e, West Branch Township; Pure Oil Co.'s No. 2 A. Reinhardt, SW SE SE Section 27, West Branch; Pure's No. 1 Mary Fisk, SW SE SW Section 27, also West Branch; Robert T. Jones and E. Arthur Durham's No. 1 Hugh Allen, SW NW SE Section 20, West Branch; Joseph Malloy and associates' No. 1 Levi W. Dack, SW SW SW Section 21, West Branch Township, and McClanahan Oil Co.'s No. 1 Frank and Joseph Heintz, NW NW NW Section 24-22n-1e, Ogemaw Township.

Six other sections of the State are represented among the other seven new permits, one for an entirely new area and two in Porter Township. They are: J. Lee Strachan, trustee's No. 1 Mary and Robert Moses, NE NE Section 19-8n-5w, North Plains Township, Ionia County, a rank wildcat; W. Hunter Atha's No. 1 J. C. McGuire, C NW NE Section 36-16n-4w, Vernon Township, Isabella County; C. E. Weller's No. 1 Battle Estate, C SW NW Section 36, Vernon; Pure Oil Co.'s No. 1 D. Alspaugh, C N half NE NW Section 2-13n-2w, Jasper Township, Midland County; Pure's No. 1-B Laura Root, SW SW SE Section 7-13n-1w, Porter Township, Midland County; McClanahan Oil Co.'s No. 2 Norman and Cecile Breu, SE SE NE Section 20-13n-1w, Porter Township; William Cline's No. 1 J. S. Weidman Estate, C NW SW Section 9-14n-6w, Broomfield Township, Isabella County, and Reed Oil Co.'s No. 1 Esther Doolittle, SW SE SE Section 25-15n-17w, Hart Township, Oceana County.

Field Potentials

Last potentials for the 10 fields as of December 22 were: Porter, 103,784 bbls.; Greendale, 3,801 bbls.; Vernon, 3,647 bbls.; Chippewa, 1,894 bbls.; Yost, 1,821 bbls.; Ogemaw, 2,004 bbls.; Leaton, 488 bbls.; Muskegon, 524 bbls.; Oceana, 299 bbls., and Saginaw, 142 bbls.

Eighteen bidders offered a total of $4,072 for oil and gas leases on 7,523 acres of state-owned land in a sale conducted by the lands division. Land offered was in Saginaw, Clare, Isabella, Midland, Ogemaw and Mecosta Counties. Although the average price offered per acre was only 54 cents, one lease in proved territory brought $8.30 an acre. Bidders recommended to be granted leases at the next meeting of the commission are: Alex Jeffrye, Saginaw; Ohio Producing & Refining Co., Cleveland; Fred W. Stork, Saginaw; George B. Talbot, Inc., Bay City, Mich.; D. F. Jones, Shepherd; Russell McGee, New York; Shell Petroleum Corp., St. Louis, Mo.; Gordon Oil Co., Mount Pleasant; C. M. LaMee, Midland; O. H. Wiley, Rosebush; J. W. Leonard, Jr., Mount Pleasant; Muskegon Oil Corp., Muskegon, Mich.; Sun Oil Co., Toledo, Ohio; F. H. Davis, Detroit; C. A. Smith, Jr., Saginaw; James G. Tiplady, Detroit; Harvey E. Kaufmann, Saginaw, and L. F. Ward, Detroit.

Wyandot County Leads Old Lima Field; Dozen Completions in Central Ohio

By GEORGE A. WHITNEY
Staff Correspondent, Central West Fields

FINDLAY, Ohio, Jan. 8.—Wyandot County continues to hold the lead in the Lima Field. Wyandot Oil Co.'s No. 7 on the Edward Reister farm, Section 11, Crawford Township, produced 5 bbls. from the Trenton at 1,325 feet. Cessna & Teasel got a light showing of oil along with a small gas pressure in the Trenton at 1,425-85 feet in No. 1 on the Thomas Bowman farm, Section 15, Pitt Township. Jones & Coyle are drilling below 610 feet in No. 1 on the Edith Swerling farm, Section 21, Tymochtee Township. U. & M. Gas Co. is shut down at 300 feet in No. 3 on the McLeod Brown farm, same section. Robert Kirk and others are shut down at 1,400 feet in No. 1 on the Joseph Coutard farm, Section 27, same township. Keiner and others are drilling No. 8 on the Louis Brandt farm, Section 34, Crane Township. Hanson and others are shut down at 600 feet on the John Culver farm, Section 1. McPheron and others are shut down in No. 1 on the Smalley farm, Section 3. Keiner and others are drilling below 400 feet in No. 3 on the Gotlieb Seiler farm, Section 34, and in No. 8 on the Louisa Brandt farm, same section.

Bosse Brothers are shut down at 1,325 feet in No. 1 on the M. and H. Bosse farm, Section 18, Van Buren Township, Hancock County.

C. H. Benke is drilling below 1,200 feet on his own farm, Section 36, Woodville Township, Sandusky County. Montgomery and others are fishing for a stem in No. 2 on the N. F. Hetrick farm, in Rice Township.

In Darke County, J. H. Hoffman's No. 7 on the H. W. Long farm, Section 16, Mississinewa Township, is a light gas well.

In Allen County, Jackson Township, Ohio Oil Co. abandoned No. 2 on the Philip S. Wingate farm, Section 16, and No. 3 Mary Stoodt farm, Section 9. In Bath Township, Ohio Oil Co. abandoned No 3 Hanson estate, Section 28; No. 25 on the Allen County Infirmary, same section; No. 5 John L. Custer farm, Section 22; No. 4 J. T. Miller farm, Section 27; No. 2 Mason Ward & Fetter farm, same section, and No. 4 on the Elizabeth Gray farm, same section.

CENTRAL OHIO

An even dozen completions were reported from the Central Ohio Field scattered over several counties. McClay Brothers' test on the Melvin McKee farm, Section 17, Fallsburg Township, Licking County, had an initial of 57 bbls. and Pure Oil Co.'s test on the Emmet Sheppard farm, Section 6, Jackson Township, Muskingum County, had an initial of 66 bbls. at a depth of 3,175 feet.

In Lorain County, Ohio Fuel Gas Co.'s No. 1 Elmer Alexander farm, Lot 86, Eaton Township, is a gas well and No. 2 same farm, is drilling. Same company is drilling No. 1 on the Chas. H. Opfer farm, Section 4, LaGrange Township.

In Holmes County, Preston Oil Co.'s No. 3 Phillip Collier farm, Section 19, Hardy Township, is drilling. In Summitt County, East Ohio Gas Co. is drilling on the Ross Lamb farm, Section 17, Green Township.

In Fairfield County, Berne Township, City Natural Gas Works is drilling No. 2 on the Jess Shull farm, Section 1, and has a rig up for No. 2 on the Mary Everett farm, Section 16. Same company has a dry hole in No. 2 on the James B. Feeman farm, Section 17, Pleasants Township, and has a rig on the Julia Boyer farm, Section 9.

In Licking County, Ohio Fuel Gas Co. has a gas well in No. 1 Russell Jones farm, Section 12, Mary Ann Township, and Armbruster & Strickler are drilling No. 3 Home Jones farm, Section 13.

In Muskingum County, Ohio Fuel Gas Co. is drilling No. 1 on the W. H Wilson farm, Los 12-19, Perry Township.

In Athens County, Ohio Fuel Gas Co.

(Continued on Page 61)

H. F. Sinclair Welcomes International Exposition

Conditions in the oil industry are good enough to encourage effort to make this year's International Petroleum Exposition and Congress in Tulsa a celebration of progress toward recovery in the oil business, says H. F. Sinclair in a letter to William B. Way, general manager of the exposition to be held May 12 to 19.

Mr. Way reports that manufacturers, supply companies and other exhibitors apparently are of the same opinion since up to January 6, 43 per cent of the booth space has been sold. Exhibitors are taking 60 per cent more space than at the last show in 1930. An average of 1.72 booths per exhibitor was sold in 1930 while the average for the 1934 show is thus far 2.54 booths per exhibitor.

The letter from Mr. Sinclair reads as follows:

"Dear Mr. Way:

"I learn with satisfaction that the International Petroleum Exposition is to be revived this year. While the skies are not all clear, much progress has been made towards re-establishing our industry on a sound basis. 'Dollar oil' is certainly better than 50-cent oil, and the outlook for further stabilization extending through the marketing division of the industry is good enough to encourage effort to make this year's exposition a celebration of progress toward recovery in the oil business. My best wishes to you for success in this effort.

"Very truly yours,
"H. F. Sinclair."

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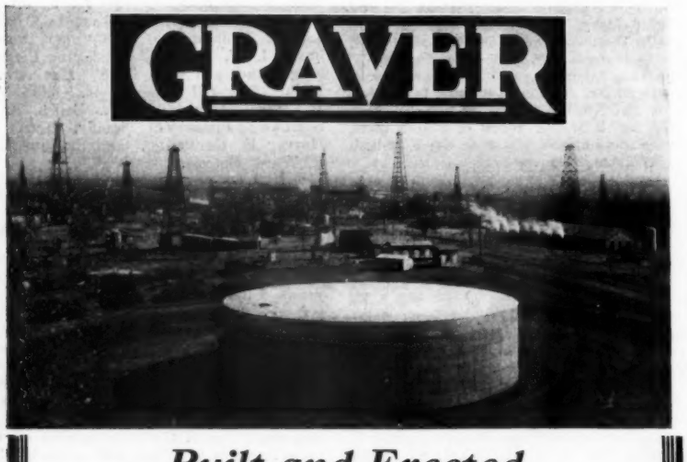

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FIELD STORAGE and REFINERY EQUIPMENT

Eleven Completions in the Eastern Fields; Two Fair Wells in Southeastern Ohio

By STAFF CORRESPONDENT

PITTSBURGH, Pa., Jan. 8.—Eleven wells were completed in the lower Eastern Fields during the week. Of these seven were gas wells and four producers with an initial production of 153 bbls. There were also six dry holes. Among the wells completed were two fair tests in southeast Ohio, one small producer, a test, in Lost Run Pool, Ritchie County, West Virginia, and an excellent gas well in the same State.

WEST VIRGINIA

There was only one producer completed in West Virginia. It was the test of R. E. Bills and others on the Vincent heirs farm in Clay district, Ritchie County. It offsets the discovery well in the Lost Run Pool on the Hinton farm and is east of it. The depth was 2,015 feet, the Injun sand, and it is producing about 5 bbls. a day, and is considered a small well in this pool. The Injun sand was drilled through into the Squaw sand without improving the production.

Five wells are drilling in this pool and one new location has been made. Elder and Louden have made a location for No. 5 on the S. E. Satterfield farm. The test of T. J. Davis and others on the William R. Kibbie farm is shut down on top of the Injun sand and waiting casing. On the Charles H. Frederick farm. G. B. Hendershot and C. B. Smith have reached the top of the Injun sand at 1,804 feet and shut down. The same operators have their No. 4 on this farm drilling at 550 feet. R. B. Roberts and others have reached 425 feet in a second test on the Sada McGinnis farm. C. F. Vincent & Co. are drilling No. 4 on the John T. and Ella B. Fox farm and are at 1,100 feet.

Gas Wells

The best well in the Eastern Fields was a test in Doddridge County, where Riley Pigott and others completed their well on the John M. Walton farm on Arnold Creek in Central district. It is showing for 4,000,000 feet a day from the Injun sand.

There were other fair gas wells in the State. In Boone County, Pure Oil Co. completed its No. 60 on the Federal Coal Co. tract in Sherman district in the Weir sand at 2,358 feet. It gauged at over 1,750,000 feet a day. In the same district, this company drilled its No. 62 on the same lease down to the Big Lime at 3,433 feet and has a small gas well.

In the gas pool near Huntington in Cabell County, R. H. Adkins and others completed a second test on the E. H. Darnell and others lease in Guyandotte district in the shale at 2,778 feet. It is good for 415,000 feet a day.

In Calhoun County, the test of Fisher and Smith on the C. A. and M. S. Snyder farm in Sherman district proved dry in the Injun sand at a depth of 1,930 feet. In Wirt County, R. C. Wagner and others completed a test on the M. Richter farm in Burning Springs district on the waters of Straight Creek. It will make a small gas well in the Salt sand.

Drilling in West Virginia

In Boone County, Pure Oil Co. is rigging up No. 63 on the Federal Coal Co. tract in Sherman district and has reached 1,357 feet in No. 64 on the same lease. On the Williams Coal Co. lease, the same company is shut down at 2,279 feet fishing for the tools in No. 259. Columbian Carbon Co. has reached 1,465 feet in No. 6 on the Broun-Cochran lease, same district. In Nichols County, the test of Godfrey L. Cabot on the W. E. Smith farm in Jefferson district has reached 2,861 feet and is drilling.

In Kanawha County, Ward Gas Co. is drilling on the D. W. Hunt farm in Poca district and has reached 1,510 feet. In Big Sandy district, Columbian Carbon Co. is down 1,065 feet in No. 12 on the Queen Land Co. lease.

In Cabell County, Martin and Swanson are shut down for a shot in their test on the Humphrey farm in Guyandotte district at 1,840 feet. In this district, R. H. Adkins and others are down 1,600 feet on the Oland G. Charles farm; C. C. Wolfe and others are drilling at 1,840 feet on the S. E. Vickers, and Black and Sansom shut down after reaching 1,050 feet on the F. H. Holswade farm.

In Roane County, the test of Frank Finley on the W. H. Smith farm in Geary district is drilling at 1,670 feet. In Smithfield district, United Fuel Gas Co. has made a location on the Frank Looney farm. In this district, Ohio Valley Gas Corp. is fishing the tools on the Josephine Young farm at a depth of 1,665 feet. In Spencer district, D. S. Fisher and others are down 300 feet in a second test on the Stella V. Knotts farm and George E. Smith is building a rig on the L. A. Short farm. In Curtis district, W. B. Heeter is drilling at 925 feet on the Maude Knopp and others lease, and Henderson Oil Co. is still down cementing in its second test on the F. L. Ball farm.

Calhoun County

In Calhoun County, W. H. Bickel is spudding in his test on the Luverna Barr farm in Sherman district. Poling and Hollahan are building a rig for a second test on the A. Simon farm and have been issued a permit for a test on the John Grimm farm. In this district, R. Fowler and others are drilling at 1,490 feet on the Lafayette Stump farm. In Washington district, Grant G. Fowler has been issued a permit on the Indianna Morris farm and Ohio Valley Gas Co. is ready to start drilling on the D. C. Bailey farm. In Lee district, Simmons Gas Co. is drilling at 500 feet in a second test on the Sylvester Brannon farm. In Center district, Everett Starcher and G. A. Richards have a rig standing on the Docie Welch farm. L. P. Bickel is fishing at 1,490 feet in No. 13 on the Martha Stump heirs farm.

In Gilmer County, Jarvis and Ayers and others have made a location on the Susan A. Gainer farm in DeKalb district and have been issued a permit on the G. H. Houghton heirs farm. In the same district, Pittsburgh & West Virginia Gas Co. is building No. 7,574 on the Quimby Kelly farm and Hope Natural Gas Co. has reached 1,980 feet in drilling deeper its No. 6,065 on the F. B. Reynolds farm. In Center district, no progress was made in the tests drilling to the Berea sand.

In Ritchie County, a permit has been issued to Petroleum Products Co. on the C. J. Carroll farm in Grant district and to South Penn Oil Co. on the Haught Lambert farm in Murphy district. In Murphy district, Dr. S. M. Prunty and others have reached 1,500 feet on the M. L. Bollinger farm. In most of the remainder of the districts wells were shut down over the holidays.

SOUTHEAST OHIO

Three producers, one gas well and five dry holes were reported from southeast Ohio. Two were fair producers and both were tests. In Licking County, National Bank of Newark, Ohio, and others completed a test on the J. N. Freese farm in Section 14, Fallsbury Township, in the Clinton sand at a depth of 3,027 feet. It produced 20 bbls. the first day, natural, and after shot this was increased to 88 bbls. the first day. In the same township but District 17, McClay Brothers completed a test on the B. H. McKee farm in the Clinton sand at 3,037 feet. The well made 25 bbls. the first day, natural, and after shot made 57 bbls. the first day. In Section 3 of Perry Township, the same operators drilled a test on the C. M. Martin farm through

the Clinton sand to 2,832 feet. It proved to be a dry hole.

In Monroe County, Blair Brothers and others drilled a test on the Charles Bowers farm in Section 2, Bethel Township, to the lime at a depth of 1,263 feet. It is producing about 3 bbls. a day natural.

In Perry County, Hopewell Fuel Gas Co. completed No. 3 on the Mike Emmett farm in the SW Section 9, Reading Township. It was completed in the Clinton sand at a depth of 2,980 feet and is showing for about 2,000,000 feet a day.

In Washington County, there were reports of four dry holes. In Newport Township, the NW Section 26, Swingle Brothers drilled No. 4 on the Junius Greenwood farm through the Salt sand to a depth of 1,150 feet. It was a dry hole. In the same township but the NW Section 15, Zero Oil Co. drilled No. 6 on the Jasper L. Noland farm through the First Cow Run sand, a depth of 450 feet, without striking pay. In Grandview Township, Peoples Banking & Trust Co. drilled No. 8 on the John McCullough heirs farm in the SW Section 34 through the Squaw sand to a depth of 1,828 feet. It was dry. In the same township but the SE Section 32, Beever and Painter drilled a test on the Clayton Holdren farm through the First Cow Run sand and found it dry.

SOUTHWEST PENNSYLVANIA

There was only one completion in southwest Pennsylvania, a small gas well. In Washington County, Elwood Oil & Gas Co. completed a test on the Lee Mansfield farm in Somerset Township in the Fifth sand at a total depth of 2,864 feet. It is showing for about 60,000 feet a day and will be completed. The top of the Fifth sand was at 2,774 feet and gas was found at 2,779-94 feet. The bottom of the sand was at 2,814 feet.

In East Findley Township, Washington County, the test of Myers, Hoskinson and others on the J. N. Clutter farm is still holding up as a good producer, making about 200 bbls. a day from the Gordon Stray sand at 2,600 feet. Offsetting this, Natural Gas Co. of West Virginia is getting ready to drill its No. 1 on the Sarah Carter farm deeper and has made a location for No. 3 on the same farm across the road from the Clutter well. On the west side of the narrow Clutter farm strip, Natural Gas Co. of West Virginia has made a tentative location for another offsetting well on the J. N. Sproul farm.

In Amwell Township, Washington County, Carnegie Natural Gas Co. has reached 1,100 feet in its test on the John C. Murphy farm, and a similar depth in its test on the C. W. Dunn farm. The Pittsburgh Coal in the Murphy was found at 810 feet and in the Dunn at 712 feet. On the Eliza Roach farm, Wise Oil & Gas Co. reached 1,080 feet and shut down with the hole caving and unable to reach bottom. Manufacturers Light & Heat Co. is building a rig on the Miles farm, offsetting the test of the Carnegie Natural Gas Co. on the C. L. Morton farm.

In Greene County, M. V. Hoskins & Co. are down 3,310 feet in drilling deeper their No. 1 on the Eli Riggs farm in Springhill Township. Manufacturers Light & Heat Co. is getting ready to drill deeper its No. 1 on the Anna Henry farm in Aleppo Township, on the waters of Pigeon Run. The depth is now 2,036 feet. In Greene Township, John Lantz has reached a depth of 1,425 feet on his own property. In Richhill Township, Richhill Oil & Gas Co. has shut down for casing at 1,430 feet on the Peter M. Gribben farm. The remainder of the wells in Greene County were shut down during the holidays.

JOHN L. NELSON DIES

FORT WORTH, Tex., Jan. 6.—John L. Nelson, well-known oil man who died last week following an operation, had been engaged in drilling an oil test well in Houston County just prior to his death, and for the last few years he had been active in oil operations in the El Dorado and Smackover Fields, Arkansas.

Central West Fields

(Continued from Page 59)

has a gas well in No. 1 on the Cora M. Evans farm, in Fractional Section 23, Lodi Township.

In Tuscarawas County, Frey and others have a gas well in No. 1 on the William C. Notz farm, Section 3, Fairfield Township. D. W. Hunt and others' have a gas well in No. 1 on the William Golden farm, Section 21, Perry Township, at 601 feet. Lynch Oil Co. is drilling No. 3 on the Robert McKeen farm, Lots 21-22, Osford Township, and J. H. Harper has a fishing job on the Oscar Kohler farm, Section 22, Jefferson Township.

Stark County

In Stark County, East Ohio Gas Co.'s test on the R. D. Staudt farm, Section 17, is a gas well at a total depth of 4,500 feet. Brendel Producing Co.'s test on the Emos R. Methis farm, Section 8, same township, is a gas well at a depth of 4,539 feet. East Ohio Gas Co. has a rig on the Charles Pontius farm, Section 16.

In Belmont County, Union Township, T. C. Hall and others are drilling No. 2 on the J. H. Lynn farm, Section 15. Robert Morgan asd others' are drilling No. 1 on the Luna E. Doughty farm, same section, and R. W. Dunn and others are getting ready to rig up No. 2 on the J. C. Walker farm, Section 15.

In Guernsey County, Preston Oil Co.'s No. 6 on the J. O. Alloway farm, Section 20, Wheeling Township, reported an initial of 10 bbls. at 3,260 feet.

In Carroll County, Brendel Producing Co.'s test on the Whittaker Greer Fireproofing Co.'s property in Section 26, Brown Township, was dry at 5,272 feet.

Frank King and others are drilling on the H. H. Fogle farm, Section 20, Somerset Township, Belmont County.

Cunningham Natural Gas Co. is shut down at a depth of 4,225 feet in No. 3 on the John Marquett farm, waiting for casing, and its No. 1 on the Catherine Donnenworth farm, Section 22, Plain Township, Stark County, is awaiting casing.

Edson Co. is drilling below 2,100 feet in No. 1 on the John Burkhardt farm, Section 4, Avon Township, Lorain County. Minor and others are drilling below 2,100 feet in No. 3 on the Mathis Myers farm, Section 32, Ridgeville Township.

Wittmer Oil & Gas Co. is drilling below 3,750 feet on the Minnie E. Simmons farm, Section 14, Lawrence Township, Stark County. Brendel Producing Co. is drilling below 2,500 feet in No. 2 on the Sam Willaman farm, Section 10, Jackson Township. Sisler and others are drilling below 3,300 feet in No. 6 Eva M. Sisler farm, Section 22. East Ohio Gas Co. is shut down at 4,430 feet in No. 1 on the Frank Deems farm, Section 18, Plain Township. Norpell and others are drilling below 3,000 feet in No. 4 on the Rachael Fleece farm, Section 14, Fallsburg Township, Licking County. H. E. Perkins is drilling below 2,100 feet on the Carl Tucker farm, Section 13, Monroe Township, Knox County.

INDIANA

In Knox County, O. A. Thayer and others brought in a test in the northeast corner of the Elza Hall farm, SW Section 14, Busseron Township, with an initial of 30 bbls. at a total depth of 801 feet. In the same county, Perry Andrews and others abandoned No. 1 on the Ida B. Doty farm, NE Section 29, Harrison Township, and F. L. Andrews abandoned No. 1 on the Slater F. Bartlou farm, NW Section 29, same township.

In Daviess County, L. G. Gee and others abandoned No. 1 on the J. Daviess farm, Section 21, Veale Township.

In Pike County, Andrews and others abandoned Nos. 1, 2 and 3 on the James L. McRoberts farm, SW Section 1, Washington Township. Murphy and others abandoned No. 3 on the Eliza D. Tame farm, NE Section 30, Madison Township. In Clay Township, A. B. Be-

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RECEIVER'S SALE

Properties *and* Equipment of

PAN-CALIFORNIA OIL CORP.

o o o

Pursuant to an Order of Sale issued by the U. S. District Court, Southern District of California, on December 7, 1933, Robert Bromberg, Receiver in Equity for the Pan California Oil Corporation, will, on January 18, 1934, at 11:00 o'clock A. M., at the base of the statue of Stephen White on the lawn in front of the Broadway entrance to the Los Angeles County Court House, sell, at public sale, to the highest bidder for cash, all the right, title and interest in the following assets of the Pan California Oil Corporation located in Los Angeles County:

Parcel 3. Inglewood absorption plant and boiler plant, described on pages 29-31 of inventory. Minimum bid $3,000.00.

Parcel 4. Warehouse and equipment therein. Equipment in yard and Gasoline Service Station, described on pages 16-25 of inventory. Gasoline Service Station described on page 34 of inventory. Minimum bid $5,500.00.

Parcel 5. All other assets of Pan California Oil Corporation, except cash, deposits, oil on hand, accounts, bills and notes receivable and royalties. More particularly, this parcel will include the leases and equipment pertaining to Pan Cal. Wells 3, 5, 7, 8, 9 and 10, described from pages 1-15 of the inventory. Also, Ford Truck and equipment described on page 32 of the inventory, office furniture and real estate described on pages 33-34 of inventory. Minimum bid for this parcel, $40,000.00.

and on January 19, 1934, at 11:00 o'clock A. M., at the south entrance of the Orange County Court House, Santa Ana, California, sell in the same manner the following assets of the Pan California Oil Corporation located in Orange County:

Parcel 1. Lots 2 and 4, Block 1802, City of Huntington Beach. Lots now under lease to H. B. Oil Company. Minimum bid, $1,000.00.

Parcel 2. Pan Cal. Well No. 4, located on Lots 26 and 2b, Block 216, Huntington Beach, as described on pages 3 and 4 of inventory. Minimum bid, $1,000.00.

All prospective purchasers must qualify with a cash deposit, or its equivalent, of at least 10% of their bid, before such bid shall be accepted.

The interest of the Pan California Oil Corporation as listed in the inventory will be sold "as is".

Copies of inventories and full particulars of the interest in the properties to be sold may be had on application.

ROBERT BROMBERG

Receiver-in-Equity

719 Security Bldg.

510 SO. SPRING STREET LOS ANGELES, CALIF.

ment abandoned No. 1 on the E. R. Catt farm, NE Location 121,

ILLINOIS

W. C. McBride's test in the southwest corner of the J. Briggs farm, Section 21, Hutton Township, Coles County, was dry at 1,035 feet.

In Wabash County, Wabash Township, Robinson Oil Co. abandoned Nos. 1 and 3 on the Adams Schaffer farm, NW Section 15. Same company abandoned Nos. 3 and 4 on the Hettie E. Robinson farm and No. 1 M. Schaffer farm, SW Section 15, and No. 1 on the William Schaffer farm, same section. In the same township and county, J. S. Young and others abandoned No. 1 D. H. Price farm, SW 16, and B. F. Wirebach & Co. abandoned No. 3 on the C. Keyser farm, SW Section 6, same township.

In St. Clair County, Ohio Oil Co. abandoned No. 2 on the William Anderline farm, NE Section 33, Sugar Loaf Township.

KENTUCKY

The only Kentucky county to report any completions was Allen, there being three, all in the Scottsville area. Jewel Wilson's No. 4 on the W. L. Motley No. 2 farm, had an initial of 2 bbls. In the same area, H. H. Coughill's No. 4 on the Berry heirs farm, was dry, and the same party drilled a dry hole in No. 55 on the E. H. Woods 2,800 acres. This property has been producing for many years and there is still a large portion not yet tested.

JAMES GUNCHEON DIES

MUSKEGON, Mich., Jan. 6.—James Guncheon, of Dayton, Ohio, one of the early operators in Michigan fields both at Muskegon and Mount Pleasant, died about a week ago at his home in Dayton. He had been engaged in lease and royalty dealing in Mount Pleasant until about a month ago when illness forced his retirement.

Greatly Improved Outlook for Industry Seen by President W. T. Holliday

By W. T. HOLLIDAY
President, Standard Oil Co. of Ohio

There is no question but that the petroleum code, backed by authority of the National Industrial Recovery Act, has greatly improved the outlook for the oil industry.

A year ago the industry faced a situation which seemed well nigh hopeless. In addition to experiencing, as did other businesses, the drastic effects of depression, the petroleum industry faced basic difficulties caused by chronic overproduction of crude oil. The price of gasoline fell to the lowest levels ever recorded. In Ohio, for example, gasoline of nonpremium quality sold at retail, in January and February, 1933, at 7 cents a gallon without tax. The tax, by the way, was 5 cents a gallon—almost as much as the price of the gasoline itself.

While the consumption of petroleum products during this period remained at a comparatively high volume, low prices not only made profits impossible but forced upon the industry losses of severe proportions.

The contrast between a year ago and the present is indeed a startling one. Today crude oil is substantially under control; prices have reached levels which permit companies operating on an efficient basis to break even, or, in some cases, actually to show profits; the demoralized situation of the industry has given way to a reasonable degree of orderly co-operation; employment has been substantially increased—and the outlook for 1934 is, on the whole, more satisfactory than has been the case for several years.

Control of Crude Production

Last spring crude oil production ran wild. Following repeated failure of attempts at local production control, production in the East Texas Field alone, for instance, jumped from 300,000 bbls. a day to over 800,000 bbls. a day. Various efforts had been made in the past to impose production restrictions by state authority alone but always with limited success and great uncertainty as to permanence. It was finally recognized that only on a national basis could control of production be satisfactorily accomplished.

Under Section 9 of the Industrial Recovery Act special power was given the President to prohibit interstate commerce shipments of petroleum or petroleum products produced or withdrawn from storage in excess of the amount permitted by any state. Moreover, the petroleum code, as finally adopted in August, incorporated a comprehensive plan for control of crude oil production with Federal aid. Production in East Texas is now as low as 350,000 bbls. a day, and total production in the United States, which had been in the neighborhood of 2,700,000 bbls., has been brought down to about 2,300,000 bbls. a day.

Naturally, control of production has been reflected by increases in the prices of crude oil and its refined products. Oklahoma crude oil which sold at 25 cents a barrel last spring is now quoted at about $1 a barrel. Similarly, the wholesale price of gasoline in Oklahoma refineries has advanced about 2 to 5 cents a gallon.

Toward Normal Prices

It must be remembered, however, that for the most part these price advances mean simply that the price of gasoline is once more getting back to somewhere near normal. During the previous period of uncontrollable overproduction and serious business depression the vast volume of crude oil constantly being pumped from the wells naturally forced itself upon the market at whatever price could be obtained for it. The result was, of course, that prices were pushed down far below cost.

The recovery of prices to present levels means simply that most oil companies are now receiving enough for their product to cover costs and, in some cases, to permit a small margin of profit. The present Ohio price of regular grade gasoline of 13½ cents per gallon, exclusive of tax, is still far below the level of any year except 1931 and 1932.

In short, despite the recovery from the extraordinarily low levels of last spring, gasoline prices are still low.

Employment Increased

It is estimated that the total increase in annual payroll for the petroleum industry, under the code, amounts to a minimum of at least $125,000,000, and may be well over $200,000,000.

In Ohio alone the new program has given work to several thousand new employes and resulted in an increase in annual payroll cost of several million dollars.

On the whole, employment readjustments involved a shortening of hours of old employes without, in the main, any reduction in total earnings, and the addition of new men to compensate for the shortened hours of the old.

The petroleum industry has for several years maintained a relatively high wage scale, and during the depression did not reduce its wages and salaries to anywhere near the extent which obtained in many other industries. With the advent of the code it joined whole-heartedly in the movement to spread available employment among the largest possible number of people and to increase wages where possible.

Costs Up Under NRA

Needless to say, from a profit and loss point of view, increases in production and operating costs due to labor provisions under the code have offset to a very great extent the benefits of increases in the price of petroleum products. Thus, while heavy losses may be a thing of the past, substantial profits may be equally a matter of the indefinite future.

Marketing conditions have been greatly stabilized by marketing sections of the petroleum code aimed at the elimination of a number of unfair competitive practices, such as secret price cutting, granting of discounts, giving of premiums, and the furnishing of pumps, tanks, etc., by suppliers to their dealers without cost. This is one of the most important benefits derived from the code.

In the long run, however, considering increased production and labor costs under the NRA, substantial returns on investments in the petroleum industry probably must await somewhat higher gasoline prices or a considerable increase in the volume of gasoline consumption.

The present excessive gasoline tax makes either of these possibilities difficult of expectation.

Gasoline Tax Excessive

Few people realize the size of the gasoline tax, or the rate at which it has been growing. In Ohio, for instance, the tax began in April, 1925, at a rate of 2 cents a gallon. This was increased to 3 cents in May, 1927, and to 4 cents in April, 1929. Then on top of this, the Federal Government, early in 1932, added a 1-cent Federal tax, which was increased, for the last half of 1933 to 1½ cents.

Ohio motorists, therefore, have been paying a total of 5½ cents a gallon in taxes—from 40 to 48 per cent on the basis of current prices.

People have not noticed the gasoline tax because while the taxes were going up gasoline prices were going down. Today's gasoline price, plus tax, is lower than the 1926 price, without tax. If gasoline prices were to return to 1926 levels with present tax rates added thereto motorists would pay almost 30 cents a gallon.

Obviously, therefore, for the oil industry to reach predepression price levels would mean that retail prices to the consumer, including the tax, would have to rise far above their predepression levels.

There are now over 20,000,000 automobile owners, and undoubtedly for many of them any marked increases in the ultimate retail prices of gasoline would constitute a serious deterrent to continued or increased operation or ownership of automobiles. In fact, it may well be that present taxes have raised retail prices to a point which already has limited motor travel in many families.

So long as present high taxes continue, therefore, there will be consumer resistance to increased prices and the oil industry as well as the automotive and its allied industries will be at a considerable disadvantage.

DEATH OF DR. O. V. MARTIN

Death cut short the career of Dr. Otto V. Martin, a leader in the field of applied science in the Southwest oil area, at the age of 41 years. He died last week in a Tulsa hospital from a combination of heart and intestinal ailments.

He evolved processes and formulas used by the Texaco Salt Products Co. of which he was chief chemist and consulting engineer, in the extraction of 22 separate chemicals from the salt brine that underlies the oil strata.

A native of Ozark, Ark., Doctor Martin was keenly interested in the wide range of ores and elements found in his home state. He studied at Hendrix College, Conway, Ark., and the University of Arkansas at Fayetteville. He also attended Prince College, Mexico, D. F., and the Georgia School of Technology in Atlanta. He received his doctor's degree at the University of Chicago in 1912.

NEW!

DAVIS

Automatic Low Water Fuel Cutout for Gas Fired Field Boilers

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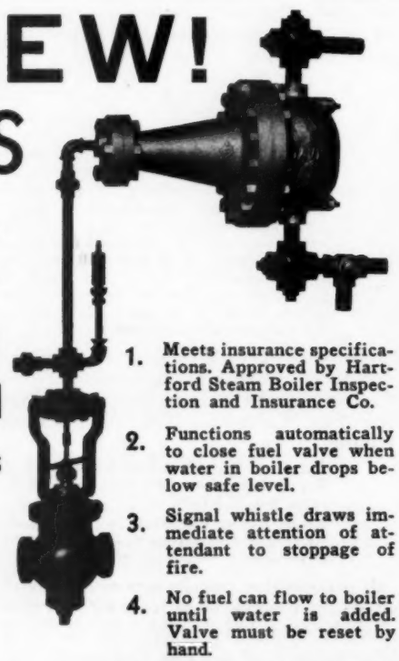

1. Meets insurance specifications. Approved by Hartford Steam Boiler Inspection and Insurance Co.
2. Functions automatically to close fuel valve when water in boiler drops below safe level.
3. Signal whistle draws immediate attention of attendant to stoppage of fire.
4. No fuel can flow to boiler until water is added. Valve must be reset by hand.
5. Standard sizes suitable for boiler pressures up to 400 pounds.
6. Low cost in comparison with value of life and equipment protected.

Write for descriptive literature.

WESTCOTT & GREIS, Inc.
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2543 S. Washtenaw Avenue, Chicago, Illinois.

TECHNICAL QUESTIONS ANSWERED

By Charles K. Francis, Ph. D., Technical Editor

This department of The Oil and Gas Journal is devoted to the manufacturing branches of the oil industry.

Those connected with the refining of crude petroleum, the manufacture of natural gasoline and closely allied industries are invited to submit their problems to Dr. C. K. Francis, technical editor. The department was created for the purpose of aiding managers, superintendents, engineers, chemists and all those engaged in the various phases of plant operation; also those connected with marketing and utilization of petroleum products.

Questions should be submitted in as much detail as possible.

Inquiries must be signed but only the given initials will be printed. The source of the question is considered to be confidential

Questions requiring a discussion of patents, the use of intricate formulas, extended computations, or cost estimates cannot be considered.

When the matter is of general interest the reply will be published within a reasonable time.

Acid Recovery From Acid Sludge by Catalytical Process

If you have the details covering a method for the treatment of refinery acid sludge to recover the acid and leave nothing more than a coke residue, the information will be appreciated.—R. C. T.

A new method for the treatment of acid sludge, known as the Heckenbleikner Process, is based on the combustion of the sludge under conditions that permit conversion of the sulphur dioxide formed to sulphuric acid in the presence of a catalyst, and a residue of coke which may be readily burned as fuel. This process was described in The Oil and Gas Journal, October 26, 1933, page 76, the material following being taken from this article.

In the operation of this process the acid sludge, which has been blended to a suitable condition, is fed into the gas end of a rotary kiln. The decomposition of the sludge proceeds in contact with a counter-current flow of hot gases produced by the burning of oil or gas in a suitably designed furnace set at the front, firing, end of the kiln. The combustion is regulated to give a low oxygen content in the combustion gases, which leave the furnace at about 2,200° F., passing directly into the kiln. The kiln is inclined to cause the material to flow through the compartments counter-current to the flow of the hot gases. Sliding joints, held by spring tension, connecting the rotating part of the kiln to the stationary ends, make the joints gas-tight. The interior of the kiln is under slight vacuum.

The inside of the kiln is provided with baffles to lift the material during the slow rotation. The dry granular residue, coke, is discharged from the kiln into a conveyer and then to storage. This is coke, suitable for burning as pulverized fuel. The gases enter the kiln at 2,220° F., but there is no overheating. The operator endeavors to control the temperature so that the coke is delivered at 500° to 550° F. The exit gases are 250° to 300° F.

The gas from the rotary kiln runs 20 per cent sulphur dioxide from the average sludge. From the kiln the gas passes through a series of washers, for cooling, condensation of water and recovery of oils. Sulphur dioxide is soluble in water so the water is re-used by circulation through cooling coils and the washer. A quantity of water equivalent to that condensed from the gases is discharged from the system while warm and therefore of low sulphur dioxide content.

After cooling, any oil is skimmed from the water. In the treatment of some sludges 50 to 60 per cent acid is used in place of water in the second washer, as the acid aids condensation of some oil vapors. From the washers the gas still contains small quantities of hydrocarbon gases; these are removed by oxidation in a secondary combustion furnace, then washed and cooled as before. The gases are finally dried in a tower fed with 85 to 93 per cent sulphuric acid.

As the gases entering the dryer do not contain enough oxygen to complete the reaction in the catalytic converter, sufficient air is admitted at the inlet to bring the oxygen content to about 1.4 times the sulphur dioxide content of the mixture. A centrifugal blower beyond the dryer serves to maintain the vacuum required through the system to the kiln. From the blower, through the rest of the plant, the gases are under pressure.

The gases are heated, through exchange, then pass into the catalytic converter, where in the presence of a vanadium catalyst the sulphur trioxide is formed. This is absorbed in one or more absorbers to produce oleum or 98 per cent acid, as may be desired.

A recovery of 90 per cent of the acid content of the sludge may be expected. The operating costs are estimated at $4/ton of 100 per cent acid produced, excluding fixed charges and overhead.

Authorities for Specifications and Testing Methods

We wish to obtain information concerning A.S.T.M. methods of testing, B.E.S.A. specifications and tests, and also U. S. Government specifications for crude oils, gasoline, kerosenes, gas oils, absorption oils, Diesel oils, lubricating oils and fuel oils, and shall be glad if you will supply us with the names and prices of literature containing this information and also the names and addresses of the publishers.—M. S.

The publications of the American Society for Testing Materials relating to the petroleum industry are largely reports of Committee D-2 on Petroleum Products and Lubricants. The annual report of the committee is priced at $1.25, obtainable from the American Society for Testing Materials, the Atlantic Building, Philadelphia, Pa. Special reports and subcommittee reports are also published.

The specifications of the British Engineering Standards Association may be obtained from the Secretary, 28 Victoria Street, London, S.W.2, London, England. The price for these is not available.

U. S. Government specifications for petroleum products have until recently been available in Technical Paper 323B, Department of Commerce, Bureau of Mines, U. S. Government Master Specification for Lubricants and Liquid Fuels and Methods for Sampling and Testing. This was sold by the Superintendent of Documents, Government Printing Office, Washington, D. C., for 15 cents. The revised specifications have appeared in the Federal Standard Stock Catalog under Section 4, with references to Technical Paper 323B for testing methods. Each product, such as Motor Fuel V, Motor Gasoline, Asphalt, etc., is described in a separate specification and sold at 5 cents by the Superintendent of Documents.

Location of Carbon Dioxide Wells in U. S. and Commercial Use

Could you give me some information covering the location of gas wells in the United States, which give a high percentage of carbon dioxide? What is considered a paying percentage of carbon dioxide in natural gas? What commercial use is made of carbon dioxide?—G. O. Y.

Carbon dioxide does not burn so its presence in natural gas is of no value, in fact it reduces the heating value and is therefore objectionable. The recent discovery of wells producing gas which is almost pure carbon dioxide has attracted much attention, because this gas may have a commercial value. Most natural gas contains some carbon dioxide, usually no more than a trace, but the Rocky Mountain region is exceptional in that a number of wells produce a gas containing over 50 per cent and there are several wells producing gas consisting of over 90 per cent carbon dioxide. These are located in Montana, Colorado, Utah and New Mexico. Some gases found in southern California are reported to contain about 25 per cent carbon dioxide. The efforts to develop these natural sources for a commercial product have been confined to the three states, Colorado, Utah and New Mexico.

A general summary of natural carbon dioxide has been made by J. Charles Miller, of the U. S. Geological Survey, published in The Oil and Gas Journal, November 9, 1933, page 19. This discussion is based on this article.

The well locations and the carbon dioxide content of the gas found in the four states are given in the table.

LOCATIONS CARBON DIOXIDE WELLS

Location—	Carbon dioxide per cent
Montana, Kevin-Sunburst:	
Pondera Valley Oil Co.'s No. 2 Larson, NE SW Sec. 17-34n-1w	82.33
Colorado, McCallum:	
Continental Oil Co.'s No. 1 Sherman, NW NW Sec. 12-9n-79w	91.82
New Mexico, Estancia Valley:	
Sinoco Oil Co.'s No. 2 Dehart, SE SW Sec. 12-7n-7e	97.80
New Mexico, Bueyeros:	
Kummbeca Oil & Gas Co.'s No. 1 Kerline, C Sec. 34-21n-30e	98.20
Utah, Farnham:	
Carbon Dioxide & Chemical Co.'s No. 1, SE SW Sec. 12-15s-11e	98.30

Mr. Miller states that in general 15 per cent is believed to be the lowest limit of carbon dioxide in a gas which can be processed economically. Other sources of supply close to consumption make it difficult to market natural carbon dioxide at a profit. The reported cost is 2 to 3 cents a pound, selling to the consumer at $100 to $160 a ton, as compared with $5 per ton for ice.

According to the U. S. Bureau of Foreign and Domestic Commerce, 90 per cent of the liquid carbon dioxide is consumed in carbonated beverages. It is used in spray painting, cleaning, and as a motive power for torpedoes. It has been used as an explosive in coal mines. An important use is as a refrigerant. The solid and liquid are both utilized as fire extinguishers.

Formula For Determining Flow of Gas in Low-Pressure Lines

When considering pipe for gathering gas, I recall seeing several years ago, a formula in one of the Bureau of Mines publications for determining the size of the pipe required, and it would be of considerable assistance if you will locate this for me.—S. M. R.

A formula for determining flow of gas in low-pressure lines, as developed by J. M. Spitzlass, was shown in Technical Paper 310 of the U. S. Bureau of Mines, Recovery of Gasoline From Uncondensed Still Vapors, by D. B. Dow. In addition to the formula, the reference contains a chart covering the formula. The following is quoted from Page 23.

"As the gas is gathered under a vacuum held by an exhauster or by the intake of a compressor, the lines should be large enough to handle under the vacuum the maximum quantity of gas produced, yet, on account of extra cost, should not be larger than necessary.

"A formula used for determining the flow of gas in low-pressure lines has been developed by Spitzglass:

$$Q = 1{,}910\sqrt{\frac{D^5H}{WL\left(1+\frac{3.6}{D}+0.03D\right)}}$$

Where Q = discharge of gas, cubic feet per hour,
D = diameter of pipe in inches,
H = fractional drop of pressure, inches of water,
W = specific gravity of gas (air = 1), and
L = length of pipe in yards.

"Plate 5 shows a diagram computed by Mr. Spitzlass to cover this formula. To illustrate the use of this diagram, assume that the gas volume is 48,000 feet per hour, the source of the gas is 100 yards from the exhauster, the gas has a specific gravity of 1.1, and it is desired to keep, with the exhauster maintaining a vacuum of 20 inches of water, a vacuum at the source of the gas of 5 inches of water. Then, to find the diameter of pipe required, start with 48,000 in Column 2, follow the dotted line horizontally to the line indicating the length of pipe (100 yards), vertically to the line representing the specific gravity of the gas (1.1), and then horizontally across the diagram to the vertical line representing drop in pressure (15 inches); read the intersecting line, representing the diameter of the pipe, which falls in the column corresponding to that in which the volume of gas was shown. The diameter of the pipe required is 6 inches."

MARKET RECORD OF OIL SECURITIES

Net profit of Union Oil Co. of California for 1933 probably approached $2,000,000, or roughly $2,300,000 less than dividend requirements at the current rate of 25 cents a share quarterly, according to the Pacific Coast Bureau of the Wall Street Journal. The company, however, is in a sufficiently strong cash and surplus position to warrant continuance of the dividend rate. Net earnings of $2,000,000 would be equivalent of 46 cents a share on the 4,386,070 shares of capital stock outstanding, compared with $3,211,084, or 73 cents a share reported for 1932. Reported net earnings for the first nine months of this year totaled $1,250,000, or 29 cents a share as compared with $2,750,000. or 62 cents a share in the corresponding period a year ago.

One of the most important considerations in connection with the Union's probable future dividend policy is the strong cash position, which has been maintained throughout the depression. Despite the contraction in its volume of business and the steady reduction in its outstanding debt, the company, through rigid economies and curtailment of capital expenditures, has succeeded in retaining an unusually liquid condition.

As of September 30, 1933, cash amounted to $14,700,000 and total current assets aggregated $47,800,000, as compared with total current liabilities of only $5,500,000. It is understood that the financial statement as of the close of 1933 will reveal an equally strong current position.

No funded debt retirements have to be met until 1935, when approximately $4,000,000 of Series C 5 per cent bonds mature. After this date there are no maturities until 1942.

During 1933 material reduction were made in outstanding debt. In the first nine months the indebtedness was reduced $5,085,000. Bonded indebtedness decreased $3,109,000 and purchase obligations notes were reduced $1,726,000. Current liabilities were cut $250,000. Since the September statement was issued, there undoubtedly have been other contraction in funded debt. The company called for redemption on October 1, $1,500,000 of its Series C 5 per cent bonds due in 1935.

Aside from the general betterment that is expected to accrue because of stabilization in the industry, Union stands to profit in 1934 from a new lubricating plant which is now nearing completion at Oleum, Calif. This plant will turn out a high grade lubricating oil which will sell in competition with eastern or Pennsylvania Grade oils.

Simms Petroleum

Simms Petroleum Co. declared a dividend of 25 cents payable February 1 to stock of record January 17. In December, 1932, the company declared a similar dividend which was paid in January, 1933. This is the first disbursement by the company since that time.

Edward T. Moore, president of the company, stated that it is the purpose of directors to make further dividend declarations from time to time if and when the condition position of the company may warrant.

Mr. Moore stated that for the last half of 1933 net income of the company was approximately $365,000, which included approximately $210,000 of book profit realized on usual year-end adjustments of crude oil inventory to market value. Net income for the last half of the year before, including this inventory profit, was approximately $155,000, or 34 cents a share. Mr. Moore said that although final figures are not available, it is estimated that after all charges a loss of approximately $28,000 will be shown for the year 1933. These figures are subject to adjustments incident to closing out of accounts for the year.

The balance sheet of Simms Petroleum Co. on November 30, 1933, showed a profit and loss surplus of $2,354,821 out of which the above dividend has been declared. The operating subsidiary, Simms Oil Co., had accumulated profit and loss deficit of $2,902,640 on that date. There was a consolidated profit and loss deficit, therefore, of $547,819. This was substantially exceeded, however, by the capital surplus of $1,351,409, leaving a net consolidated surplus available for distribution.

Lone Star Gas

Lone Star Gas Corp. has declared the regular quarterly dividend of $1.63 on the 6½ per cent preferred stock, payable February 1 to stock of record January 15.

Consolidated Royalty

At a meeting of the board of directors of the Consolidated Royalty Oil Co. held at the office of the company, 401 Consolidated Royalty Building, Casper, Wyo., January 4, 1934, a quarterly dividend of 5 cents per share was declared, payable January 25, 1934, to stockholders of record of January 15. This is the sixty-fifth consecutive quarterly dividend paid by the company.

Twenty Representative Stocks

The Oil and Gas Journal's weekly average price of 20 representative petroleum stocks listed on the New York Stock Exchange and New York Curb. based on closing quotations, was as follows:

June 28	23.86	Oct. *4	23.29
July 5	25.20	Oct. 13	22.72
July 12	25.74	Oct. 21	20.52
July 19	24.89	Oct. 28	22.62
July 26	22.25	Nov. 4	22.81
Aug. 2	20.29	Nov. 11	23.76
Aug. 9	22.29	Nov. 18	25.17
Aug. 16	21.05	Nov. 23	24.61
Aug. 23	23.40	Nov. 28	24.30
Aug. 30	24.04	Dec. 7	24.53
Sept. 6	24.68	Dec. 14	24.50
Sept. 13	25.45	Dec. 21	22.99
Sept. 20	25.28	Dec. 28	22.88
Sept. 27	23.01	Jan. 4	23.64

Sun Oil

Holders of Sun Oil Co. 15-year 5½ per cent sinking fund debentures have been notified by the Chase National Bank, as sinking fund agent, that it will receive sealed tenders for the sale to it of not exceeding $133,500 of these debentures at a price not to exceed 101½ and accrued interest. Tenders will be opened at noon January 19.

ONCE MR. ROCKEFELLER'S AID

NEW YORK, Jan. 6.—James A. Jenkings, for 25 years the personal aide to John D. Rockefeller, Sr., when he was

Independent Oils on New York Curb

Quotations Compiled by Francis, Bro. & Co., Associate Members of New York Curb, Kennedy Building, Tulsa, Okla.

(Complete record week ended Dec. 30)

1933 High	1933 Low	Week ended December 30 Sales	High	Low	Close	Stocks		Outstanding capital	Par value	Div. rate	Payable or last paid	1930 High	1930 Low	1931 High	1931 Low	1932 High	1932 Low
2⅜	3/16	4,700	¾	⅝	¾	American Maracaibo	(sh)	700,000	N.P.	....	.....	4½	½	1¾	¼	¾	1/16
5½	1¼	300	1⅜	1¼	1¼	Arkansas Natural Gas	(sh)	4,084.225	N.P.	....	.....	16¾	4⅝	6½	1⅞	3¾	⅜
4	⅞	7,100	1⅛	⅞	1	Arkansas Natural Gas "A"	(sh)	3,522.521	N.P.	....	.....	16⅝	4⅝	6¾	1⅞	3⅜	½
4⅞	2	100	2½	2½	2½	Arkansas Natural Gas pfd.	(sh)	2,193,000	$10	....	4- 1-32	8⅛	6¼	7	3⅞	5⅝	1½
14¾	6¼	No sales ..	..	..	..	British American Oil Corp.	(sh)	2,622.642	N.P.	20cQ	3-14-33	23	13¾	16⅞	6¼	9¾	6¾
7¾	¼	16,500	3¼	2⅝	3¼	Carib Syndicate	(sh)	579,000	25c	....	.....	2¾	⅝	2⅜	¼	¾	⅛
6¼	1½	42,300	1⅞	1½	1⅞	Cities Service	(sh)	36,979,065	N.P.	....	6- 1-32	44¼	13	20¾	5	6⅞	1¼
30	10	1,100	11¼	10	11¼	Cities Service pfd.	(sh)	1,125,931	N.P.	....	6- 1-31	93⅞	78¼	84¾	35⅜	53⅜	10
2½	5/8	26,568	¾	¾	¾	Columbia Oil & Gasoline v.t.c.	(sh)	2,000,000	$1	....	.....	¾	⅛	½	1/16	2⅛	½
4	¼	3,400	1⅛	1	1⅛	Colon Oil	(sh)	2,200,000	N.P.	....	.....	8¼	1⅛	3⅛	¼	1¼	¼
2⅞	1	600	1¾	1½	1½	Consolidated Royalty Oil Co.		$5,527,880	$10	5cQ	1-25-33	5⅞	2	2¾	1	2	1
3⅞	1⅜	3,800	2¼	1⅜	2⅛	Cosden Oil	(sh)	323,950	N.P.	....	.....	74¾	1¼	3¾	⅜	2⅞	¼
8	2¼	150	5¼	5⅛	5¼	Darby Petroleum	(sh)	609,696	N.P.	....	10-15-30	21¾	4¼	5	1¾	7⅛	1⅝
2¾	⅞	1,200	2	1½	2	Derby Oil & Refining	(sh)	500,000	N.P.	....	.....	11	2	6	1½	3	1
62	24	6,440	59⅞	53¾	59¾	Gulf Oil Corp.	(sh)	4,504,921	$25	....	10- 1-31	166⅞	58½	75½	25⅜	44¾	23
6½	1¼	200	1¾	1½	1½	Indian Terr. Illum. Oil "B"	(sh)	7,090,037	N.P.	....	.....	53½	12⅝	16⅞	5	4½	1½
2	5/8	1,000	1⅛	1	1⅛	Kirby Petroleum	(sh)	750,000	N.P.	10c	4-15-33	3	⅞	1⅞	¼	1	⅜
1½	⅛	1,500	⅞	1/16	⅜	Leonard Oil & Development		$50,000,000	$25	....	.....	5	¾	2	½	¾	⅛
2¼	3/8	10,100	2¼	1⅜	2⅛	La. Land & Exp.	(sh)	3,000.000	N.P.	....	.....	4¾	½	1½	¼	2½	½
9½	1¼	100	4¾	4¾	4¾	Lion Oil & Refining	(sh)	250.000	N.P.	....	10-27-30	29	4⅞	6¾	1½	3½	⅞
12⅞	4¾	5,700	6⅛	5	6⅛	Lone Star Gas	(sh)	5,000.000	N.P.	16cQ‡	3-31-33	55⅞	19⅝	25	5½	11	3⅜
6½	2⅛	300	3	2¾	3	Memphis Natural Gas	(sh)	920,000	N.P.	....	4-15-32	22¼	7½	12⅛	4½	5¼	1⅝
5	1½	800	1⅝	1½	1½	Mexico-Ohio Oil Co.		500.000	N.P.	....	.....	7½	1¾	4⅞	1½	3⅜	1½
1¼	¼	100	½	½	½	Mountain & Gulf		$4.000,000	$1	....	4-15-31	¾	⅜	½	⅛	⅜	⅛
6½	2½	600	4	3⅞	4	Mountain Producers		$1,682,182	$10	20cQ	4- 1-33	12⅛	3¾	5⅞	2	4¾	2½
20	10	900	14¼	13½	14¼	National Fuel Gas	(sh)	3,810,183	N.P.	25cQ	1-16-33	41⅜	19⅜	26½	9¾	14⅝	8
2⅛	½	600	2	1¾	1¾	New Bradford Oil		$7,224,186	$5	....	4-15-31	3½	1⅛	1½	½	⅞	⅜
1⅞	½	600	⅞	¾	⅞	New Mexico and Arizona		$1,000,000	$1	....	.....	7¼	1½	3	¾	1¼	⅜
5	½	500	2	2	2	North Central Texas	(sh)	262,446	$5	....	9- 2-30	11¼	2⅛	3¼	⅝	1½	⅜
½	1/16	200	1/16	1/16	1/16	North European Oil	(sh)	1,372,391	N.P.	....	.....	6¼	⅝	2⅛	¼	⅜	1/16
7½	3	No sales ..	..	..	..	Pacific Western Oil	(sh)	1,000.000	N.P.	....	.....	19½	5½	15	2⅞	8	3
3¾	⅛	8,400	1¼	¾	1¼	Pantapec Oil	(sh)	1,595.500	N.P.	....	.....	4⅜	⅞	2	⅜	⅝	1/16
1⅞	¼	700	⅞	⅝	⅞	Reiter-Foster	(sh)	388,584	N.P.	....	12- 2-29	5⅜	1	3⅛	¼	½	1/16
2¼	¼	200	½	½	½	Richfield Oil pfd. x.w.	(sh)	399,950	$25	....	.....	23½	6½	11	¼	1	⅛
4¼	⅝	1,300	1¾	1¼	1¼	Ryan Consolidated	(sh)	296,931	N.P.	....	.....	8⅝	2	3	¾	2⅛	⅝
1	⅜	100	1/16	1/16	1/16	Salt Creek Consolidated	(sh)	1,286.300	$10	....	4- 1-31	2½	½	1⅜	⅛	⅞	⅛
9¼	3½	1,700	6	5½	6	Salt Creek Producers	(sh)	1,496.859	$10	25c	2- 1-33	15¼	5¼	7¾	2¾	5½	2⅞
1½	¼	3,200	1/16	⅝	⅝	Sunray Oil	(sh)	1,163.185	$5	....	4-15-31	10	2	5¼	¼	⅝	⅛
13	6¼	800	6½	6¼	6½	Texon Oil & Land	(sh)	936,036	N.P.	25c†	12-30-32	19½	8	12⅞	2½	10½	4½
1½	⅜	4,400	1/16	½	⅝	Venezuelan Petroleum	(sh)	755,090	$5	....	2-15-30	4¼	⅜	1⅞	¼	1/16	⅛
3¾	1½	100	3⅜	3⅛	3⅜	Woodley Petroleum		$500,000	$1	....	3-31-29	5	½	3½	1⅛	2⅜	1⅛

*Ex-dividend. †Plus extra dividend of 25 cents. ‡Payable in stock. §Paid in lieu of regular cash dividend of 2 per cent.

active in the oil business, died last week in the Mount Vernon Hospital at the age of 60. He had been connected with the New York office of Mr. Rockefeller, as the latter's personal secretary.

ATTACK NEW TEXAS LAW

AUSTIN, Tex., Jan. 6.—Suit attacking the state's new law which makes distribution of gasoline in Texas without a permit a felony has been filed in Travis County District Court by Owl Refining Co. of Kilgore and Arp. A temporary injunction was granted the company restraining state officials from enforcing the new law pending outcome of the suit.

HOWARD A. WILKINSON DIES

NEW YORK, Jan. 8.—Howard A. Wilkinson, a retired vice president and director of the Standard Oil Co. of New York, died last week at his home in New Rochelle, after a long illness. He was born in Everett, Mass., 60 years ago. His son, Roger M., is with the Standard Oil Co. of New York.

Mr. Wilkinson started in business in 1886 with the Maverick Oil Co. of Boston, and entered the service of the Standard Oil organization when it bought the Maverick interests a few months later. For a time before the dissolution decree of 1912, he was associated with the Standard Oil Co. of New Jersey. In 1920 he became a director of the Standard Oil Co. of New York and he remained with it until his retirement in February, 1932. While vice president he had charge of domestic sales.

Standard Oil Stocks on New York Curb

Quotations Compiled by Francis, Bro. & Co., Associate Members of New York Curb, Kennedy Building, Tulsa, Okla.

(Complete record week ended Dec. 30)

1933 High	1933 Low	Week ended Dec. 30 Sales	High	Low	Close	Stocks—		Outstanding capital	Par value	Div. rate	Payable or last paid	1930 High	1930 Low	1931 High	1931 Low	1932 High	1932 Low
13	6	50	6	6	6	Borne Scrymser		$1,000,000	$25	....	10-15-30	25	11¼	16	6	7	6
39¾	25	110	31	31	31	Buckeye Pipe Line		$10,000,000	$50	75cQ	6-15-33	69	39⅞	56	30	35	17½
129	71	100	120	119	119	Chesebrough Mfg.		$3,000,000	$25	$1Q‡	6-29-33	184⅞	104¼	129½	75	90	53
12	2¼	16,500	10¾	9½	10¾	Creole Petroleum	(sh)	6,974,356	$5	....	.....	7⅞	3	3⅞	1⅝	3⅛	1⅝
41¾	20	No sales	..	..	..	Eureka Pipe Line		$5,000,000	$100	$1Q	8- 1-33	54¾	26	36	19	35	18
105½	40	3,000	101¾	99½	100	Humble Oil & Refining		$74,365,725	$25	50cQ	7- 1-33	119	57¼	72	44¼	55	35⅝
15⅞	6½	12,600	13¼	12⅝	13	Imperial Oil of Canada	(sh)	26,557,496	N.P.	12½cQ	9- 1-33	30	15	18¼	7⅜	10⅞	6¼
8	3⅛	100	4¾	4¾	4¾	Indiana Pipe Line		$3,000,000	$10	15cS.A.	5-15-33	41	14½	21⅛	5½	7½	2¾
23½	8⅞	10,800	20	18⅞	20	International Petroleum	(sh)	14,247,088	N.P.	28cQ§	6-15-33	24	11⅜	15½	7⅜	12¼	8
10	5½	300	7⅞	7¾	7¾	National Transit		$6,362,500	$12.50	35cS.A.	6-15-33	22⅜	11½	17½	5	10½	6
4⅞	3	200	3⅛	3	3	New York Transit	(sh)	500,000	$5	15cQ	4-15-33	21⅜	10¼	14½	5⅞	6	2¼
6⅛	4¼	No sales	..	..	..	Northern Pipe Line		$1,200,000	$10	25c	7- 1-33	54	26¼	35½	20	5½	3⅛
22¼	11	1,400	18	17½	18	South Penn Oil		$30,000,000	$25	25cQ	3-31-33	45⅞	16⅛	23⅞	9¼	16½	9⅝
6	2¾	No sales	..	..	..	Southern Pipe Line		$1,000,000	$10	10cQ	3- 1-33	20⅞	8⅜	17	7	10	3¾
43	24½	No sales	..	..	..	Southwest Pennsylvania Pipe Line		$1,750,000	$50	$1Q	7- 1-33	64	32	42½	25	37	27
34	17	22,300	32⅝	32¼	32⅜	Standard Oil of Indiana	(sh)	15,941,895	$25	25cQ	6-15-33	59⅞	30	38½	13½	25⅛	13⅛
19¼	8⅜	7,600	15⅛	14	15⅛	Standard Oil of Kentucky		$26,069,830	$10	25cQ	6-15-33	40½	18⅝	23⅝	12½	15⅞	8⅞
20½	11	No sales	..	..	..	Standard Oil of Nebraska		$4,770,550	$25	25cQ	9-20-33	48⅞	34⅝	36½	16	19	10¼
41	15½	1,250	23½	21½	23	Standard Oil of Ohio		$18,811,675	$25	37½cQ	1- 3-33	108½	43¼	62½	23	30⅛	15½
3	1	No sales	..	..	..	Swan-Finch Co.	(sh)	34,480	$25	....	1-15-29	10	4	4½	1	2	1⅝

*Ex-dividend. †Unit of trading less than 100 shares. ‡Plus 50 cents extra. §Payable in Canadian funds.

Transactions in Oil Shares on New York Stock Exchange

Quotations Compiled by Francis, Bro. & Co., Members of the New York Stock Exchange and Associate Members of New York Curb, Kennedy Building, Tulsa, Okla.

(Complete record week ended Dec. 30)

1933 High	1933 Low	Week ended Dec. 30 Sales	High	Low	Close	Stocks—		Outstanding capital	Par value	Div. rate	Payable or last paid	1930 High	1930 Low	1931 High	1931 Low	1932 High	1932 Low
47⅝	18½	4,300	42½	39½	42½	Amerada Corp.	(sh)	774,875	N.P.	50cQ	7-31-33	31½	16½	23	11¼	22¾	12
35½	6¾	30	32½	29	29	Associated Oil		$34,356,180	$15	25cQ	.....	51	30	31	8¾	16½	6½
32½	12⅜	18,100	29⅜	28⅛	28⅞	Atlantic Refining		$67,416,050	$25	25cQ	6-15-33	51⅜	16⅝	23⅝	8⅝	21⅞	8⅝
11	3	24,100	8⅜	7⅝	7⅞	Barnsdall Corp. A		$11,293,895	$5	....	5-11-31	34	8⅝	14½	4	7	3⅜
28⅛	9	71,104	12⅝	10⅜	12½	Columbia Gas & El.	(sh)	11,684,220	N.P.	20cQ§	5-15-33	87	30⅝	45⅝	11⅝	21	4¼
12	5¼	2,700	7	7	7	Colonial Beacon Oil	(sh)	1,444,970	N.P.	....	12-22-22	20⅜	8⅜	10½	7½	12½	9
15¾	5	63,700	10⅞	10	10¾	Consolidated Oil Corp.	(sh)	14,218,835	N.P.	....	.....	..	..	..	..	9	4
19⅝	4⅞	36,200	17⅝	16⅝	17⅝	Continental Oil of Delaware	(sh)	4,738,593	$5	....	12-15-27	30½	7¾	12	5	9⅜	3⅝
43¼	13¾	11,700	35	32⅛	35	General American Transportation		751,638	N.P.	25cQ	1- 2-33	111⅞	53⅛	73⅛	28	35¾	9½
27	4⅝	6,610	16¼	14¾	15⅛	General Asphalt	(sh)	413,333	$10	....	6-15-32	71½	22⅜	47	9⅝	15½	4⅝
38	8¼	2,200	21⅞	20¼	21	Houston Oil		$24,968,600	$100	....	10-17-30	116⅞	29¼	68½	15¾	28¼	8¾
4½	1⅛	1,200	2¾	2¾	2¾	Indian Refining		$12,564,070	$10	....	10- 1-30	17	2	4⅝	1⅛	2¾	1
4	⅝	3,000	1¼	1	1¼	Louisiana Oil Refining	(sh)	1,309,069	N.P.	....	.....	12	3½	4½	1	2¼	½
4	½	1,200	1⅜	1⅛	1¼	Maracaibo Oil	(sh)	330,000	N.P.	....	.....	10⅜	1⅜	3¾	½	1½	⅝
16	3¾	11,200	12	10½	12	Mid-Continent Petroleum	(sh)	1,857,912	N.P.	....	2-16-31	32	11	16¾	5	8⅞	3¾
28⅝	4	2,200	12¼	10½	11	National Supply of Delaware	(sh)	390,879	$25	....	5-15-31	124¾	60	70¼	5	13	3½
17⅝	4¾	20,000	13⅝	12½	13½	Ohio Oil	(sh)	6,562,005	N.P.	....	12-15-32	32	16	19½	5⅛	11	5
14	8	300	11	11	11	Pan American P. & T.	(sh)	3,416,082	$5	....	3-15-33	46½	42	35⅛	20	14	6
4¼	⅜	100	⅞	⅞	⅞	Panhandle P. & R.	(sh)	198,770	N.P.	....	.....	12¾	1¾	4¼	⅝	1¼	¼
18¾	4¾	32,200	16¾	14⅝	16¼	Phillips Petroleum	(sh)	4,156,908	N.P.	....	1- 2-31	44⅝	11½	16⅝	4	8⅛	2
1⅞	¼	2,000	⅞	⅝	¾	Pierce Oil Corp.		$29,622,831	$25	....	.....	2½	½	1½	¼	¾	¼
2¾	⅝	3,800	1½	1⅛	1¼	Pierce Petroleum	(sh)	2,500,000	N.P.	....	2-16-31	7⅛	1⅛	3⅜	½	1⅝	½
17⅝	6¾	7,400	13⅞	12⅝	13¾	Plymouth Oil Co.	(sh)	1,050,000	$5	75cA	.....	..	..	..	..	12½	8½
15½	5⅝	200	10	10	10	Prairie Oil & Gas		$61,035,800	$25	....	3-31-31	54	11¼	20⅜	4⅛	9½	3½
22	7	No sales	..	..	..	Prairie Pipe Line		$101,250,000	$25	....	6-30-31	60	16⅝	26½	5⅞	12¼	5½
2⅞	¼	82,125	⅜	¼	¼	Producers & Refiners		$37,438,950	$50	....	9-15-23	11⅞	1	6	1	1⅝	⅛
13	2	No sales	..	..	..	Producers & Refiners pfd.		$2,845,350	$50	....	5- 4-25	40	11½	16	3	9¾	1
15⅜	2½	14,700	10¾	10⅛	10⅝	Pure Oil		$75,959,250	$25	....	9- 1-30	27¼	7⅝	11⅞	3¼	6½	2⅞
39¾	17⅝	1,700	36⅜	35⅞	36	Royal Dutch N. Y.	(sh)	611,303	....	80½c†	8- 5-32	56½	36⅞	42⅝	13	23¾	12⅛
43⅜	15	10,400	29	26½	28½	Seaboard Oil of Delaware	(sh)	1,204,460	$4	15cQ	9-15-33	37	9¾	20¾	5½	20⅜	6⅝
24¾	11¼	No sales	..	..	..	Shell Transport & Trading Co.		£23,985,000	£1	53c†	7-22-32	48⅜	26	34	5	16⅜	8
11⅝	4	13,600	8	7¼	7⅞	Shell Union Oil	(sh)	13,066,497	N.P.	....	6-30-30	25½	5¼	10¼	2½	8¾	2½
61	28½	1,100	59½	57½	59½	Shell Union Oil pfd	(sh)	400,000	$100	....	7- 1-31	106¼	55	78	15	65¼	18
12⅝	4⅞	2,500	9½	9	9¼	Simms Petroleum	(sh)	600,000	$20	25cQ	1-16-32	37	5⅝	11	3½	7½	3¼
9⅞	3	1,600	8¾	8½	8¾	Skelly Oil		$27,441,250	$25	....	12-15-30	12	10⅛	12⅞	2	5¾	2½
57½	22	100	54⅛	54⅛	54⅛	Skelly Oil pfd.	(sh)	119,800	$100	....	5- 1-31	99¾	42	62	10	33½	12
17	6	68,200	16⅜	15½	16¼	Socony-Vacuum		$792,711,738	$25	....	3-15-33	106⅜	98	106	87⅛	12¼	5¼
102¾	92½	800	98	96⅜	96⅜	Standard Oil Export pfd.	(sh)	764,885	$100	$2.50SA.	12-31-32	..	..	21	8⅜	100½	81
45	19½	39,100	41⅝	37⅛	41	Standard Oil of California	(sh)	13,102,900	N.P.	25cQ	6-15-33	75	42½	51¾	23¼	31⅞	15⅛
36	12¾	No sales	..	..	..	Standard Oil of Kansas		$8,000,000	$25	....	3-16-31	49	14⅜	19	7¾	16½	7
47½	22¾	43,900	46⅛	44⅝	45¾	Standard Oil of New Jersey		$637,961,700	$25	50cS.A.	6-15-33	84⅞	32½	52½	26	37⅜	19⅞
50	35	400	52½	52	52	Sun Oil	(sh)	1,531,422	N.P.	25cQ	6-15-33	70	39	45¼	26¾	39⅞	24¾
4½	¾	5,200	1⅞	1⅝	1⅞	Superior Oil Corp.	(sh)	776,979	N.P.	....	12-20-30	9⅜	¾	1⅜	¼	2	¼
30⅛	10¾	35,700	24⅞	22¾	24⅜	The Texas Corporation		$246,204,900	$25	25cQ	7- 1-33	60½	28¼	36¼	9⅞	18¼	9¼
6½	1⅜	1,400	20	17½	17½	Texas Pacific Coal & Oil Co.		$9,304,890	$10	....	12-31-29	14½	4	6½	1⅞	4	1½
26	9¼	100	26	26	26	Tide Water Oil	(sh)	2,190,323	N.P.	....	12-31-32	31	13	18	9⅞	10	5
65¼	23½	1,600	65	63¾	65	Tide Water Oil pfd.	(sh)	199,446	N.P.	....	2-15-33	94⅞	71	83	30	62	30
11⅜	3⅛	36,800	8⅞	7¾	8⅝	Tide Water Associated	(sh)	5,611,100	N.P.	....	2-16-31	17¾	5⅞	9	2⅛	5⅝	2
80	45	800	80	78	80	Tide Water Associated pfd.		$73,284,500	....	....	1- 1-33	89¾	55	68	20½	60	20
23⅜	8½	5,200	19	18⅛	18⅞	Union Oil of California	(sh)	4,386,070	$25	25cQ	8-10-33	50	10⅛	26⅝	11	15⅜	8
22¾	10½	2,000	17⅛	16	17⅛	Union Tank Car	(sh)	1,254,048	N.P.	30cQ	6- 1-33	38½	23	25⅛	16	19¼	11¾
4⅞	⅝	1,200	1½	1¼	1¼	Warner-Quinlan	(sh)	632,948	N.P.	....	7- 1-30	27	4¼	7⅜	⅞	2¼	½
5½	2	1,000	4	3¾	3¾	Wilcox Oil & Gas	(sh)	428,967	$5	....	5-10-28	21	6½	9⅜	2¾	8¾	2¾

*Ex-dividend. †Interim dividend for 1931. §Payable in 5% convertible preferred stock. A—Paid this year; no regular rate.

In comparing highs and lows for the several years in the three tables, it will be necessary to take into consideration cases where there have been stock split-ups.

Oklahoma-Kansas and Eastern Monthly Pipe Line Report

OKLAHOMA-KANSAS PIPE LINE STATEMENT FOR SEPTEMBER

Runs

Company—	Month (bbls.)	Dy.av. (bbls.)
Gulf Pipe Line Co.	1,314,706	43,824
Texas P. L. Co.	600,515	20,017
Empire P. L. Co.	2,501,941	83,398
Magnolia P. L. Co.	1,262,576	42,086
Cosden P. L. Co.	915,561	30,519
Stanolind P. L. Co.*	3,360,000	112,000
Oklahoma P. L. Co.	2,757,372	91,912
Other lines*	7,860,000	262,000
Total September	20,572,671	685,756
Total August	22,838,708	736,733
Difference	2,266,037	50,977

Shipments

Gulf P. L. Co.	1,528,523	50,951
Texas P. L. Co.	796,264	26,542
Empire P. L. Co.	2,419,828	80,661
Magnolia P. L. Co.	1,241,134	41,371
Cosden P. L. Co.	874,499	29,150
Stanolind P. L. Co.†	4,485,000	149,500
Oklahoma P. L. Co.	2,718,581	90,619
Other lines*	6,060,000	202,000
Total September	20,123,829	670,794
Total August	19,882,017	641,355
Difference	241,812	29,439

Stocks

Sinclair Prairie Oil Mktg. Co.*	29,542,000
Gulf P. L. and Gypsy Oil Co.	7,607,347
Texas Co.	4,747,079
Empire P. L. Co.	5,911,130
Mid-Continent Pet. Corp.	2,642,268
Magnolia Pet. Co.	7,460,121
Stanolind Crude Oil Pur Co.*	13,162,000
Oklahoma Pipe Line Co.	1,304,019
Carter Oil Co.	2,518,388
Other lines*	19,804,903
Total September	94,599,255
Total August	94,496,755
Difference	102,500

*Estimated. †Stanolind Pipe Line Co. shipments include Texas crude oil.

EASTERN PIPE LINE REPORT FOR MONTH OF OCTOBER

Runs From Wells

In the following table will be found the regular receipts from wells by various pipe lines in New York, Pennsylvania, West Virginia, Ohio, Kentucky, Illinois, Indiana and Michigan for September and October:

	Sept., 1933	Oct., 1933
Nat. Transit	278,357.47	291,401.82
S. W. Pa. P. L.	71,457.72	76,986.05
Eureka P. L.	275,260.78	299,836.34
Buckeye P. L. (Macksburg)	245,044.65	261,516.57
Buckeye P. L. (Cleveland)	10,137.70	11,549.86
Buckeye P. L. (Lima, etc.)	66,050.77	70,474.35
Stoll Oil Ref.	26,433.00	26,919.00
Bradford Tran.	422,999.86	445,585.36
N. Y. Transit	31,777.52	37,133.35
Tide Water P. L.	21,300.93	22,491.64
Pure Oil	737,296.96	754,603.48
Daugh'ty Ref.	520.00	794.00
Valvoline Pipe	75,415.56	86,959.65
Other companies	233,760.47	239,032.00
Total	2,495,813.44	2,625,277.50
Daily average	83,193.78	84,686.37

Petroleum Deliveries

The following tables exhibit the shipments or regular deliveries of various pipe lines in New York, Pennsylvania, West Virginia, Ohio, Kentucky and Indiana for September and October:

	Sept., 1933	Oct., 1933
Nat. Transit	513,071.68	564,777.36
S. W. Pa. P. L.	480,278.79	422,939.33
Eureka P. L.	279,563.41	287,229.58
Buckeye P. L. (Macksburg)	259,900.01	256,564.17
Buckeye P. L. (Cleveland)	1,463.24	1,941.50
Buckeye P. L. (Lima, etc.)	1,548,524.14	1,948,096.57
Indiana P. L.	892,003.38	893,175.98
Bradford Tran.	378,457.87	356,110.56
Southern P. L.	29,270.09	29,977.38
Tuscarora Dev.	253,395.59	308,172.65
N. Y. Transit	183,857.99	182,894.85
Northern P. L.	151,479.61	138,692.91
Tide Water P. L.	514,883.41	326,248.96
Pure Oil	683,718.94	686,421.04
Valvoline P. L.	37,582.65	43,797.22
Other companies	179,942.94	198,403.73
Total	6,387,393.74	6,645,225.84
Daily average	212,913.13	214,362.17

Gross Stocks

The gross stocks held by various pipe lines in the oil-producing sections of New York, Pennsylvania, West Virginia, Ohio, Indiana and Kentucky at the close of September and October:

	Sept., 1933	Oct., 1933
Nat. Transit	455,553.29	418,056.64
S. W. Pa. P. L.	367,913.26	316,822.16
Eureka P. L.	819,400.61	802,223.18
Buckeye P. L. (Macksburg)	303,848.61	268,025.63
Buckeye P. L. (Cleveland)	43,672.06	42,574.98
Buckeye P. L. (Lima, etc.)	2,138,677.75	2,381,039.36
Indiana P. L.	487,046.74	430,438.49
Bradford Trana.	151,875.89	245,217.79
Southern P. L.	117,350.27	136,034.46
Tuscarora	6,538.41	6,149.58
N. Y. Transit	97,126.14	109,286.44
Northern P. L.	172,967.67	198,138.67
Tide Water P. L.	708,543.08	707,797.63
Pure Oil	442,352.45	549,670.40
Valvoline	111,015.73	124,300.28
Other companies	127,253.17	117,032.94
Total	6,601,134.13	6,852,809.18
Decrease	16,142.47	
Increase		251,675.05

Grades of Oil

The following tabe shows the amount of the different grades of oil held by the eastern pipe lines at the close of September and October, showing gross stocks of the above fields:

	Sept., 1933	Oct., 1933
Pennsylvania	2,426,155.20	2,539,529.90
Lima	453,465.05	442,727.34
Kentucky	563.32	
Mid-Continent	2,326,914.57	2,368,606.00
Illinois	10,297.73	10,631.83
Michigan	383,738.26	491,314.11
Total	6,601,134.13	6,852,809.18

Daily Average Runs

The following table shows the daily average runs of the Pennsylvania, Lima and Kentucky oil fields for the past four years:

	1930	1931	1932	1933
Jan.	75,907	53,939	53,501	64,493
Feb.	79,256	55,163	55,498	58,140
Mar.	76,688	54,331	57,189	59,417
Apr.	84,536	54,914	57,345	61,813
May	70,546	53,344	59,105	65,755
June	75,430	54,110	64,371	67,370
July	68,921	50,723	63,402	68,100
Aug.	54,291	51,503	67,676	77,537
Sept.	56,595	61,345	65,423	83,193
Oct.	58,179	65,595	65,960	84,686
Nov.	52,332	59,819	60,602	.....
Dec.	53,999	61,835	57,401	.....

Daily Average Shipments

The following table gives daily average shipments from the Pennsylvania, Lima and other fields for the past four years:

	1930	1931	1932	1933
Jan.	217,623	175,269	186,551	198,996
Feb.	224,355	183,494	169,856	187,928
Mar.	228,846	189,508	188,793	183,632
Apr.	241,845	191,450	202,036	181,940
May	248,383	199,247	201,404	199,671
June	234,401	221,155	201,632	211,980
July	207,094	211,632	202,859	213,417
Aug.	205,506	224,166	187,829	211,123
Sept.	193,999	217,552	170,534	212,913
Oct.	157,675	216,831	188,504	214,362
Nov.	146,638	196,426	189,626	.....
Dec.	143,001	176,241	186,135	.....

Gross Receipts

In the following table will be found the gross stocks of the various lines of the Pennsylvania, Lima and Kentucky oil fields, including oil received from other lines at the close of each month for the past three years:

	1931	1932	1933
Jan.	11,831,093	9,033,914	7,608,270
Feb.	11,506,489	8,974,350	7,302,746
Mar.	11,012,162	8,802,192	7,379,843
Apr.	11,044,481	8,908,461	7,212,548
May	10,728,239	8,835,726	7,016,621
June	9,903,349	8,732,724	6,766,038
July	9,569,849	8,176,956	6,713,942
Aug.	9,192,457	8,128,576	6,617,276
Sept.	8,492,431	7,895,421	6,601,134
Oct.	8,417,694	7,421,620	6,852,809
Nov.	8,830,386	7,116,200	.....
Dec.	9,119,032	7,139,420	.....

The Illinois Field

The following table gives the report of the Illinois Pipe Line Co. in Illinois:

	Bbls.
Gross stocks, Nov. 1	555,592.52
Runs from wells	435,820.24
Other receipts	21,337.65
Regular deliveries	278,352.62
Other deliveries	157,539.38

The amount of Illinois oil run by the Tide Water Pipe Co. in October was 22,491.64 bbls. Deliveries were 21,361.37 bbls. Adding these figures to those of the Illinois Pipe Line Co. makes the runs and deliveries as follows:

1933—	Runs	Deliveries
October	458,311.38	299,714.00
1932—		
January	590,177.12	246,634.10
February	482,561.50	186,010.30
March	565,538.70	270,617.75
April	461,920.92	285,817.98
May	521,884.64	279,859.38
June	501,878.26	263,703.70
July	466,635.89	284,537.18
August	476,095.53	307,325.39
September	436,529.00	329,994.39
October	332,680.67	352,620.34
November	346,880.27	338,251.32
December	336,072.57	317,749.63
1933—		
January	344,054.84	314,108.93
February	306,520.61	294,340.35
March	385,665.57	314,514.48
April	311,146.72	356,455.50
May	361,901.38	334,420.38
June	420,865.87	350,984.36
July	455,997.46	428,608.53
August	479,798.34	431,176.90
September	457,408.62	376,502.96

Tide Water Pipe Co., Ltd., also delivered in October, 135,400.50 bbls. of Oklahoma oil.

Average Daily Imports of Crude and Refined Oil at Principal United States Ports

Average barrels per day in 1932-33—	ATLANTIC PORTS: Baltimore	Boston	New York	Philadelphia	Others	Total	GULF COAST PORTS: Galveston	New Orleans, Baton Rouge	Port Arthur, Sabine Pass	Tampa	Total	Total all ports
September	5,100	2,200	57,900	12,167	10,066	87,433	.....	.....	.....	.....	.....	87,433
October	14,032	.....	72,193	30,645	7,129	124,000	.....	.....	.....	.....	2,000	126,000
November	14,167	.....	49,967	19,233	8,900	92,267	.....	.....	.....	.....	2,133	94,400
December	14,258	2,065	84,323	28,162	9,256	138,064	.....	.....	.....	.....	5,226	143,290
January	7,644	4,355	64,194	25,710	6,613	108,516	.....	.....	.....	.....	548	109,064
February	7,682	4,789	120,490	12,619	10,822	156,393	.....	.....	.....	.....	2,357	158,750
March	7,710	4,290	101,258	36,292	16,000	165,290	.....	.....	.....	.....	.....	165,290
April	10,000	6,700	73,433	32,267	9,967	132,367	.....	.....	.....	.....	.....	132,367
May	4,258	2,194	62,484	32,548	3,355	94,839	.....	.....	.....	.....	4,355	99,194
June	4,833	.....	46,967	29,967	5,233	87,000	.....	.....	.....	.....	.....	87,000
July	10,645	2,452	91,258	33,161	2,968	140,484	.....	.....	.....	.....	6,194	146,678
August	13,774	2,452	112,193	33,484	6,742	168,645	.....	.....	.....	.....	2,161	170,806

Average Daily Receipts of California Crude and Refined Oil at Atlantic and Gulf Ports

Average barrels per day in 1932-33—	ATLANTIC PORTS: Baltimore	Boston	New York	Philadelphia	Others	Total	GULF COAST PORTS: Galveston	New Orleans, Baton Rouge	Port Arthur, Sabine Pass	Tampa	Total	Total all ports
September	2,900	.....	5,000	11,633	7,967	27,500	.....	.....	.....	.....	.....	27,500
October	2,387	1,226	14,452	9,355	9,193	36,613	.....	.....	.....	.....	.....	36,613
November	4,667	.....	21,790	7,767	2,366	36,500	.....	.....	.....	.....	.....	36,500
December	4,129	.....	15,678	5,322	8,226	33,355	.....	.....	.....	.....	4,903	38,258
January	968	1,484	20,903	3,742	18,064	45,161	.....	.....	.....	.....	.....	45,161
February	9,106	1,643	14,250	10,965	11,500	47,464	.....	.....	.....	.....	2,643	50,107
March	5,065	.....	16,516	9,968	13,935	45,484	.....	.....	.....	.....	7,484	52,968
April	6,000	.....	14,500	7,733	4,934	33,167	.....	.....	.....	.....	4,900	38,067
May	4,194	.....	15,255	14,293	5,871	39,613	.....	.....	.....	.....	4,452	44,065
June	1,267	.....	5,300	11,767	7,667	26,000	.....	.....	.....	.....	4,938	30,938
July	3,773	.....	17,323	24,097	15,194	60,387	.....	.....	.....	.....	.....	60,387
August	2,484	1,742	12,065	15,032	7,129	38,452	.....	.....	.....	.....	.....	38,452

Gross Production of Crude Oil in the United States for 12 Months

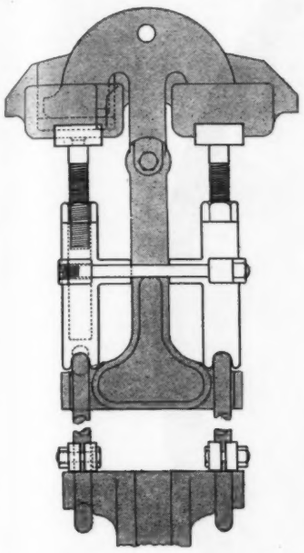
(In barrels of 42 gallons)

1932-33—		California	Oklahoma	Texas	Kansas	Arkansas	Louisiana	Rocky Mts.	Eastern	Total
October:	Month	14,627,663	11,915,811	27,213,832	2,892,486	1,019,931	1,963,063	2,254,444	3,814,000	65,701,230
	Daily average	471,860	384,381	877,866	93,306	32,901	63,325	72,724	123,033	2,119,394
November:	Month	14,142,389	11,340,930	26,155,652	2,841,780	1,020,600	1,962,943	2,169,685	3,578,000	63,211,979
	Daily average	471,413	378,031	871,855	94,726	34,020	65,431	72,323	119,267	2,197,066
December:	Month	14,595,028	11,637,171	23,487,818	2,777,879	1,037,539	1,966,481	2,067,855	3,694,000	61,263,771
	Daily average	470,807	375,393	757,672	89,609	33,469	63,435	66,705	119,161	1,976,251
January:	Month	14,460,282	12,550,784	26,116,932	2,871,282	993,457	2,021,117	2,241,610	3,112,000	64,366,464
	Daily average	466,461	404,864	842,449	92,622	32,047	65,197	72,310	100,387	2,076,338
February:	Month	13,107,043	12,579,992	25,092,383	2,801,512	880,208	1,793,443	2,096,612	2,747,000	61,099,193
	Daily average	468,109	449,464	896,156	100,054	31,436	64,051	74,879	98,011	2,181,757
March:	Month	13,414,930	15,456,236	24,242,444	3,604,539	943,702	2,070,695	2,371,469	3,118,000	75,221,065
	Daily average	432,741	498,556	1,104,595	116,276	30,442	66,797	76,499	100,581	2,426,486
April:	Month	14,362,942	11,720,010	27,306,582	3,492,990	909,120	2,156,736	2,209,470	3,017,000	65,074,851
	Daily average	475,431	390,667	910,219	116,433	30,304	71,891	73,649	100,567	2,169,162
May:	Month	14,817,633	13,521,580	49,151,776	3,277,103	928,667	2,116,296	2,294,558	3,177,000	89,284,613
	Daily average	477,988	436,180	1,585,541	105,713	29,957	68,268	74,018	102,161	2,880,149
June:	Month	14,344,654	14,339,070	39,907,737	3,210,150	901,770	2,009,831	2,239,650	3,057,000	80,009,862
	Daily average	478,155	477,969	1,330,258	107,035	30,059	66,994	74,655	101,900	2,666,995
July:	Month	15,140,828	18,350,795	37,623,069	4,068,130	991,008	2,137,667	2,477,148	3,474,000	84,432,645
	Daily average	488,414	597,445	1,213,647	131,230	31,968	68,957	79,908	112,065	2,723,634
August:	Month	15,536,841	18,763,122	37,596,147	3,908,294	924,234	2,292,881	2,494,630	3,850,000	85,276,148
	Daily average	501,188	605,262	1,209,876	126,074	29,814	73,964	80,472	124,194	2,750,844
September:	Month	14,673,846	16,743,510	33,416,220	3,729,000	1,083,300	2,112,456	2,472,480	3,890,000	78,120,812
	Daily average	489,128	558,117	1,113,874	124,300	36,110	70,415	82,416	129,667	2,604,827
Total 12 months		173,124,130	169,079,011	387,219,592	39,475,145	11,633,536	24,603,609	27,389,611	40,528,000	873,052,634

NEW AND IMPROVED EQUIPMENT

Bridgeport Machine Has New Hanger Attachment

To increase the versatility of its line of straight lift pumping hangers, the Bridgeport Machine Co., Wichita, Kans., has designed the simple pumping hanger



attachment illustrated here, which converts the semirigid or flexible hanger into a stiff or rigid type for use on extremely fast pumping where it is desired to push and pull the rods at a rapid rate, as in taking tests or potentials.

The head clamp stiffens the knuckle-joint and holds the reins rigidly in place on the head. The lower clamps hold the reins tightly in place on the polished rod clamp. The attachment is installed easily and quickly. After serving its purpose it is readily removed, leaving the flexible hanger for regular pumping.

This attachment eliminates the necessity of tying the flexible type pumping hanger down as is often done in taking potential tests, and as the attachment may be moved from one well to another as tests are taken, it represents little investment. The one attachment fits all types of Bridgeport straight-lift pumping hangers.

Ready Control Is Feature of Universal Arc Welders

Universal arc welders utilizing the shunt inductor principle of arc stabilization in motor-generator and gasoline engine driven models are now available with four-wheel portable trailer mounting, as well as the two-wheel trailer type previously announced by Universal Power Corp., Clarkstone Road, Cleveland, Ohio.

The Universal generator with two dirt-free cartridge enclosed ball bearings is flexibly coupled to a rugged six-cylinder engine and mounted on a rigid structural steel chassis, with "donut" low-pressure balloon tires, giving a unit of gravity and good roadability.

A novel idling control instantly responsive to the will of the operator permits the engine to run slowly when not welding, economizing on gasoline, lubricating oil and engine life. When ready to weld, the operator at his electrode holder brings the equipment again to automatic governed speed and proceeds with his work.

Among the Equipment Houses

Allis-Chalmers Manufacturing Co. has moved its Tulsa office to 18 North Guthrie Avenue, increasing its quarters and combining the office with its warehouse stock of Tex-Rope drives, motors, pumps, and other equipment for the petroleum industry.

—

Harry W. McQuaid has joined the metallurgical staff of Republic Steel Corp., according to announcement by Earl C. Smith, chief metallurgist. Mr. McQuaid is a pioneer in grain size control and collaborated in the development of the McQuaid-Ehn test. He will devote his time to research and development work.

—

William Sewall, sales promotion manager of the Associated Tire Lines of the B. F. Goodrich Co., Akron, Ohio, has been assigned to the Akron staff of the petroleum sales department, it is announced by C. B. O'Connor, general sales manager of the Goodrich tire division.

—

The American Cyanamid & Chemical Corp. has opened an office in the New Center Building, Detroit, Mich. George S. Horsfull, resident representative of the company, is in charge.

—

Charles F. Norton, formerly vice president and general manager of the Howell Electric Motors Co., who recently became associated with the Louis Allis Co. of Milwaukee, Wis., has been appointed general sales manager of the latter organization.

—

The Dowell Chemical Co., Midland, Mich., has opened a warehouse in Odessa, Tex., to supply the Permian Basin with acid for treating lime wells in that district. John C. Staudt is manager.

—

Lloyd R. Leaver, sales manager of the mechanical rubber goods division of the Thermoid Rubber Co., Trenton, N. J., has been elected vice president of the New Jersey Rubber Manufacturers Association.

—

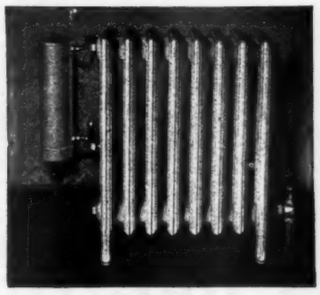
Howard Coonley, elected to the presidency of the American Standards Association for 1934, is president of the Walworth Co., New York, and also a director of several industrial, insurance and banking organizations.

—

Karl Kautz, ceramic engineer, has joined the staff of Republic Steel Corp., Youngstown, Ohio, and will specialize in research and field service on enameling sheets. Prior to this connection, he was ceramic chemist with Abingdon Sanitary Manufacturing Co., Abingdon, Ill.

Humidifier Designed for Office and Shop Buildings

To meet the demand for a humidifier that actually will provide humidity for offices, shop buildings, etc., to protect



health and furnishings, the American Radiator Co., 40 West Fortieth Street, New York, has placed on the market the ARCO humidifier "A," a humidifying attachment for existing radiators on either steam or hot water systems.

This attachment is fastened to the end of the radiator so that the heating medium (either steam or hot water) flows through a coil immersed in water, bringing the water near the boiling point and causing constant vaporization. Included in the unit is an electrical heating element that can be used as an auxiliary source of heat for vaporization, on hot water systems or on steam systems when the boiler is operating with little pressure.

A cylinder surrounding the coil is filled with water manually, and there is an automatic switch to turn off the electrical element should it be working when all the water evaporates. The unit, which is made of brass with a nickel finish, can be attached to either old-style radiators or recent models.

Gardner-Denver Announces New Size Drilling Engine

Contributions to drilling economy, efficiency, and dependability are made in a new 14 by 12 twin rotary drilling engine announced by the Gardner-Denver Co., Quincy, Ill. The desirable features of the company's 12 by 12 engine are retained, and, in addition, the 14 by 12 operates efficiently on 250 pounds steam pressure.

Ruggedness and strength, with economy of operation, characterize the new 14 by 12. The semisteel main frame is cast in one piece, and a special method of ribbing increases the strength and rigidity of the entire structure. Elimination of vibration is so nearly complete that there is said to be no jarring when the engine is reversed from full speed ahead. This ability to reverse instantly also provides a safety factor. The substantial construction of the frame, with its broad bearing on the foundation and complete machining at one setting is designed to assure alignment of the reciprocating parts.

The piston valve type cylinders are of chrome nickel mixture. Main bearings are Timken, and the forged steel connecting rods are equipped with Timken roller crankpin bearings with wedge takeup. Working parts are fully enclosed. Crankcase lubrication is automatic.

BRISTOL CO. OF CANADA, LTD.

The Bristol Co., Waterbury, Conn., announces that in order to serve the Canadian market better and to expand and consolidate its present Canadian service laboratory, the Bristol Co. of Canada, Ltd., has been incorporated. Factory and general headquarters will be at 64 Princess Street, Toronto, Ontario, where Bristol recording, indicating and control instruments will be made. J. S. Mayberry has been appointed manager.

Men Well Known in the Equipment Field

H. P. Mee, who has succeeded G. L. Bell as a director and vice president in charge of sales of Caterpillar Tractor Co., has been a member of that organization

H. P. MEE

14 years, having joined the C. L. Best Tractor Co. of San Leandro, Calif., as cashier and credit manager in 1920. When the Caterpillar Tractor Co. was formed in 1925, he was elected treasurer, later becoming secretary and treasurer, and then vice president and treasurer, which position he occupied at the time he was elected to his new office.

Mr. Mee was born in San Francisco and started his business career as an office boy for the J. K. Armsby Co., later merged with the California Packing Corp. He engaged successively in the stock brokerage business, the fruit commission business, the oil business with the Union Oil Co., and the railroad business with the Southern Pacific. In 1915 he became associated with an organization which specialized in business rehabilitation and management, and after two years of this kind of work he resigned to become treasurer of Hunt Brothers Packing Co. of San Francisco. He continued in this position for three years, resigning to join the C. L. Best Tractor Co.

Smallest Ditcher Added to Line of Buckeye Machines

The Buckeye Traction Ditcher Co. has added a new model to its line of ditching and trenching machines. The new Model 11 is the smallest of the Buckeyes, a service ditcher built for fast nimble operation in cramped quarters, anywhere that a trench up to 22 inches in width and 5½ feet deep need be dug.

Overall width of the machine is only 52 inches. It is mounted on full length Alligator traction units of the latest Buckeye design and may be turned completely around in its own length. As in other Buckeye wheel type machines, the Model 11 has the rotary digging wheel, the rugged strength and smooth operation of which permits its operation at speeds that produce remarkable footage records.

The Model 11 is available in three different bucket widths, cutting trench 11½ to 14½ inches, 14½ to 18 inches, and 18 to 22 inches.

IS IT AS GOOD AS PITTSBURGH?

Pittsburgh P Products

Pittsburgh Seamless

OIL WELL TUBING

DRILL PIPE

CASING

● "Is it as good as 'Pittsburgh'?" is a familiar question among drillers. Rigid adherence to high-quality manufacturing processes accounts for the standard of pipe excellence which "Pittsburgh" products have set and still maintain . . . Gruelling performance, in which these quality standards have been tested to the satisfaction of drilling experts, has helped to make the name "Pittsburgh" a measure of pipe quality wherever oil flows.

PITTSBURGH STEEL CO.

PITTSBURGH, PA.

NEW YORK DETROIT CHICAGO ST. LOUIS
HOUSTON TULSA LOS ANGELES

NATURAL GAS DEVELOPMENTS

Peoples Gas Co. Refutes Charges of Coal Men

CHICAGO, Jan. 8.—Counsel for the Peoples Gas Light & Coke Co. and the Illinois Coal Operators Association are busy on the hearing before the Illinois Commerce Commission on the complaint of the coal operators against the gas company based on contract terms for the sale of gas to large industrial consumers.

The answer of the gas company to the coal operators' complaint has been filed with the commission. It denies in general terms all the points made by the coal operators in their petition for a hearing and investigation and makes specific denial of charges of price discrimination, unlawful contract relations and sales of gas below cost. The answer of the gas company admits entering into a contract with Swift & Co. for the sale of natural gas and in the event of emergency to provide oil as a substitute. On that point the answer said:

"Respondent denies the matters, conclusions and objections set forth in Section 2 of the complaint, and with respect thereto, says that respondent is now furnishing gas to Swift & Co. under a gas sale contract entered into in accordance with service classification No. 10 of the schedule of rates for gas service now on file with the commission and made effective by its order entered June 17, 1933."

The answer further stated that it has leased gas and oil burners and other equipment to Swift & Co. for a period ending December 31, 1935, and has agreed that in the event the supply of gas to the packing company is interrupted that it will sell Swift & Co. fuel oil during the period of interruption of gas service at such a price as to make the cost of generating a thousand pounds of steam no greater than the cost if generated by gas bought under the terms of the contract.

The answer further said: "Respondent denies that said arrangements are illegal upon any of the grounds set forth in Section 2 of the complaint or upon any other grounds."

In denying the allegation that sales of gas to Swift and other large industrial users were made below cost the company's answer claimed that the sales were not only profitable, but that if they were eliminated costs of other consumers would be increased. The company asserted that the rates were not a burden or discriminatory and were in fact a direct benefit and advantage to other customers.

LINE TO POTASH PLANT

MIDLAND, Tex., Jan. 6.—Workmen will complete the laying of a natural gas pipe line to the United States Potash Co.'s refinery in Lea County, New Mexico, about January 25, according to H. G. Frost, general manager of the El Paso Natural Gas Co. and president of the Eddy County Gas Co. The new Eddy County Gas Co., incorporated under Delaware laws, is laying the line to the potash properties.

UTILIZE SEWER GAS

EDMONTON, Alberta, Jan. 6.—According to City Engineer A. W. Haddow, sewer gas of the methane type has for some time been successfully utilized for heating various civic works buildings. Gas is piped from No. 1 sewage disposal plant, to serve stables, paving plant, blacksmith shop, machine shop and garages, about 30,000 feet a day being used out of an available production of around 75,000 feet.

Natural Gas Sales Increase During 1933 But Revenues Decline 3 Per Cent

Revenue from manufactured and natural gas utilities in the United States in 1933 aggregated $685,000,000, representing a decrease of 5.6 per cent from the 1932 figure, according to Alexander Forward, managing director of the American Gas Association.

The manufactured gas companies reported revenues of $380,000,000 for the year, or 7.5 per cent less than for the same period of the preceding year, while revenues of the natural gas utilities aggregated $305,000,000, a decline of 3 per cent, according to preliminary estimates of the association's statistical department.

Sales of manufactured gas for 1933 totaled 340,000,000,000 feet, a loss of 5 per cent, while natural gas sales were 850,000,000,000 feet, or an increase of 2 per cent over the corresponding period of the preceding year.

The decline in natural gas sales for domestic and commercial purposes was relatively small, amounting to less than 4.2 per cent. However, natural gas sales for industrial purposes registered an increase of about 7 per cent.

The amount of natural gas used for nonutility purposes including manufacture of carbon black and consumed in oi. and gas field operations apparently was the same as for 1932, with the result that the entire consumption of natural gas for all purposes during 1933 is expected to run about 1 per cent above the corresponding figure in 1932.

Natural gas customers in 1933 were only 0.5 per cent fewer than in 1932.

PRELIMINARY ESTIMATES FOR 1933

	Manufactured gas	% Change from 1932
Customers	9,700,000	—2.0
Gas sales (MCF)	340,000,000	—5.0
Revenue	$380,000,000	—7.5

	*Natural gas	% Change from 1932
Customers	5,500,000	—0.5
Gas sales (MCF)	*850,000,000	+2.0
Revenue	*$305,000,000	—3.0

*Natural gas estimates do not include quantity of gas used for carbon black and field use or the value of such gas. Very approximate figures for these uses would be 700,000,000 MCF with a value of $35,000,000.

MILES OF MAIN
(Transmission and distribution)

(a) Natural gas	160,000
(b) Manufactured gas	95,000
(c) Total	255,000

TOTAL INVESTMENT

(a) *Natural gas	$2,000,000,000
(b) Manufactured gas	2,500,000,000
(c) Total	$4,500,000,000

*Includes $1,600,000,000 invested in natural gas mains and pipe lines.

SOUTHWEST GAS RECEIVER

WILMINGTON, Del., Jan. 6.—Charles F. Richards, Wilmington attorney, has been appointed receiver in chancery court for Southwest Gas Utilities Corp. of Shreveport, La., on application of Walker P. Montgomery, a bondholder of Ventnor City, N. J. The bill of complaint was filed several months ago and the corporation filed an answer denying the allegation of insolvency. The corporation was permitted to withdraw its answer and file an amended answer admitting inability to meet maturing obligations and consenting to the appointment of receiver.

The bill of complaint alleged that the corporation failed to pay semiannual interest on $7,000,000 outstanding first lien sinking fund gold bonds, 6½ per cent series, since November, 1931, and by reason of failure to comply with sinking fund provisions of indenture, the entire issue has matured and is due and payable.

WILL CONFER ON WACO RATE

AUSTIN, Tex., Jan. 8.—Chester L. May, vice president and general manager of the Texas Cities Gas Co., has notified officials of the city of Waco that he is ready to confer with them about proposals for reduction of the domestic gas rate in Waco. This was in response to an invitation of the city commission that he confer with it on its proposals for the reduction.

CALGARY GAS TESTED

CALGARY, Alberta, Jan. 6.—Tests of the heating quality of the natural gas furnished to Calgary by the Canadian Western Natural Gas, Light, Heat & Power Co. have been conducted by the city chemist and the city council has requested the Dominion government to authorized Dr. W. P. Campbell of the engineering department at Ottawa to make comparative tests. Testing operations are to determine whether the extraction of residual naphtha as a result of the operations of the new Royalite Oil Co. gasoline absorption plant has reduced the heating value of the gas supplied from the Turner Valley Field. University analysis on November 18, 1933, showed samples to vary from 1,162 to 1,178 B.t.u.; while tests by the Calgary city chemist on November 14 showed 1,162 B.t.u.

DOVER GAS STRIKE

CHATHAM, Ontario, Jan. 6.—It is reported from the Dover Field, Kent County, Ontario, Ajax Oil & Gas Co.'s No. 6 Antaya farm, SE Lot 1, Concession 4, Dover East Township, has encountered a fair show of gas in the Trenton limestone and is deepening. It entered the Trenton at 2,899 feet. Prairie Oil & Gas Co.'s No. 2 Stephens farm, Lot 2, front concession, Dover East, is shut down at 1,035 feet. In Haldimand County, the McLister drilling outfit has completed a good gasser on the Richard Gifford farm near Gypsum mines.

GAS LEASE SUIT

CASPER, Wyo., Jan. 6.—The Montana Eastern Pipe Line Co. has filed suit in the Federal District Court of Minnesota against the Minnesota Northern Power Co., Montana-Dakota Utilities Co. and Gas Development Co., operating pipe lines out of eastern Montana, alleging damages in the amount of $150,000 from drainage of gas leases.

WALLACEBURG GAS FRANCHISE

WALLACEBURG, Ontario, Jan. 6.—Ratepayers of Wallaceburg at the municipal elections this week voted down a proposal to renew the existing natural gas franchise of the Union Gas Co. for a further 10-year period.

Texarkana Consumers Sue for Refund of Gas Charges

SHREVEPORT, La., Jan. 6.—The Texarkana, Tex., city council, at a special meeting, voted to employ special counsel and seek a refund from the Southern Cities Distributing Co. for charges for gas supplied to consumers during the last three and a half years. The amount claimed is in excess of $80,000.

The council's action followed the court battle recently decided in the city's favor by the U. S. Supreme Court and is based upon a provision contained in the gas company's charter to the effect that rates on the Texas side should never be in excess of those charged to consumers of gas on the Arkansas side of town.

The Southern Cities Distributing Co. recently paid into the Arkansas side Federal court more than $56,000 as refunds to Arkansas side consumers which it is announced will be returned to the consumers as soon as Federal Judge Ragon makes an order, which is expected within the next 30 days.

Rate Making Law Upset by Texas Supreme Court

AUSTIN, Tex., Jan. 8.—The Supreme Court has held unconstitutional the act of the Forty-second Legislature which empowered cities of less than 2,000 population to fix and regulate utility rates charged within their confines, thereby upsetting ordinances of Santa Anna and Farmersville. One sought to regulate gas rates and the other electric light charges.

Under the new decision there is no legal authority now existing in Texas for towns between 500 and 2,000 population to fix their utility charges as the Supreme Court held the act conferring that power was void because of a defective caption.

HELIUM IN INDIA AND BURMA

The records of the Geological Survey of India report that, with the co-operation of the Burmah Oil Co., the Indo-Burma Petroleum Co. and the British Burmah Petroleum Co., and in response to a request from the Division of Civil Aviation for information concerning possible sources of supply of helium in India and Burma, five samples of natural gas from the Yenangyaung, Singu, Indaw and Pyaye fields were forwarded to the India Institute of Science for analysis (including the estimation of the helium content). The results of these analyses will be awaited with interest. In connection with the study of the natural gas resources of Burma Mr. Barber, resident geologist of the Yenangyaung oil field, has made a detailed survey of the deep test wells that have been drilled and his conclusions will be embodied in a memoir on that subject.

ORDERS CUT IN LOUISIANA

BATON ROUGE, La., Jan. 8.—Orders formally approving reduction of the domestic gas rate in Farmerville, Choudrant, Downsville, Simsboro and Gibsland to 60 cents a thousand feet from 75 cents have been issued by the Louisiana Public Service Commission. The commission approved the reduction on recommendation of Chairman Harvey G. Fields after investigating complaints that the charges of the Peoples Gas & Fuel Co. were excessive. The company is contesting in Federal court a recently issued commission order lowering its rates in Ruston.

In Stock—On the Job

The above photo is a panoramic view of the South Chester stock yard at Houston, Texas.

This picture shows more clearly than words the large, complete and accessible stock of casing and tubing that will meet quickly and fully any demand from the field.

★

Casing delivered from the above stock yard has been used in a large percentage of East Texas drillings. At the left is a typical scene from that field showing some "Chester" casing being run in.

CHESTER

STEEL SPECIALISTS IN CASING FOR DEEP WELL DRILLING **CASING**

LINE PIPE

Chester also makes "Wrought Iron" pipe—manufactured from genuine old-fashioned hand puddled muck bar made in our own mills from 100% pig iron.

SOUTH CHESTER TUBE COMPANY, CHESTER, PA.

DISTRICT SALES MANAGERS:
W. E. Gibson, 801 Columbia Bank Bldg., Pittsburgh, Pa.
H. A. Morse, 30 Church Street, New York City, N. Y.
J. P. Cooney, 715-716 A. G. Bartlett Bldg., Los Angeles, Calif.
J. P. Steele, 217 Petroleum Bldg., Fort Worth, Texas.

DISTRICT OFFICES:
J. D. Swartz, 1231 S. Evanston St., Tulsa, Okla.
E. L. Moseley, 2218 Mills St., Houston, Texas.
Burt S. Shafer, Southwest Representative, 4313 Fairfax Ave., Dallas, Texas or 217 Petroleum Bldg., Fort Worth, Texas.

DISTRICT WAREHOUSES:
Houston, Texas; Thenard, Calif.; San Francisco, Calif.

DISTRIBUTORS:
United Pipe & Supply Co., Charleston, Danville, West Hamlin, W. Va.; Paintsville, Ashland, Allen, Prestonburg, Kentucky.
Prichard Supply Co., Mannington, W. Va.; Mather and Waynesburg, Pa.
LaValley, McLeod, Kinkaid Co., Inc., Elmira and Olean, New York.
Kane Supply Company, Kane, Lawrenceville, Brookville, Pa.
Bovaird and Company, Bradford, Pa.
Pelican Well Tool & Supply Co., Shreveport, La., Kilgore, Texas.
Great Northern Tool & Supply Co., Billings, and Kevin, Mont., Kemmerer and Cody, Wyo.
Star Drilling Machine Co., 550 Clinton Street, Portland, Oregon and Akron, Ohio.
Stephen H. McCabe, 508 4th Street, San Francisco, Calif.
Bardo Steel Company, Seattle, Wash. and Portland, Oregon.
Union Supply Corp., Sulphur, La. and Brimstone, La.
Dunigan Tool and Supply Co., Main Office, Breckenridge Texas; Branch Stores, Willow Springs, Pampa, Turnertown, McCamey, Texas and Hobbs, New Mexico.

FIELD PROBLEMS FROM READERS

Edited by Thomas F. Smiley

This department is conducted in order that men connected with the drilling, producing and transporting branches of the petroleum industry may obtain aid in solving problems that confront them in their work. Readers are invited to send questions freely. These questions will be placed in the hands of persons capable of answering them authoritatively, and the answers, based on the best available information, will be published.

Each question should give as much detail as possible, especially if it involves depth of sands, types of sands and operations on adjoining or nearby properties. The source of questions will be considered confidential, and only the initials of the sender will be published. Questions involving patented processes, intricate formulas or estimates of cost cannot be answered. If an immediate answer is important, one will be given by mail when the writer requests it.

In this connection, The Oil and Gas Journal will be glad to publish articles from field men who have devised new methods or improved old ones.

Is Installing New Cooling Water System and Asks Suggestions

We are putting in a new cooling water system for a Diesel engine plant and would like to have your suggestions concerning the quantity of water per minute for the engines, the G.P.M. on the cold side of the exchanger, the square feet of exchanger capacity and any other recommendations you care to make. The peak load will be about 300 horsepower and the average load less than 200 horsepower. We shall use rainwater to cool the engine cylinders and there will be about 35,000 gallons in our soft-water system at all times. It will flow by gravity from the elevated tank to the engines through an open funnel on the side of the engine, then through the exchanger and to a cistern, where it will be picked up and pumped into the elevated tank. The water will enter the engines at about 80° F. and be discharged at 120°. Hard water will be used on the cold side of the exchanger, entering at about 65° and discharging at about 75°. Would appreciate comment on the temperature mentioned.—J. J. C.

It is not within the province of this department to compute actual results in problems such as you submit, but the subjoined formula is quoted for your benefit from a paper presented before the Mid-Continent section of the American Society of Mechanical Engineers by Floyd E. Warterfield, Jr., engineer for the Oklahoma Pipe Line Co., Tulsa, and published in The Oil and Gas Journal of March 17, 1932. This paper is entitled "Closed Cooling Systems for Diesels" and is recognized as authoritative on this subject. The portion answering your particular question follows:

"In order to select heat exchangers and pumps of the correct design it is necessary to determine the amount of cooling water required for individual engine operating conditions. One convenient formula in general use, and reported by L. H. Morrison, in 'American Diesel Engines' (McGraw-Hill Co., 1931), gives the weight of water required per horsepower hour.

$$W = \frac{xH}{100\,(t_2 - t_1)}$$

where:

W = Weight of water required per horsepower hour.

x = Percentage of heat absorbed by the water.

H = Total heat supplied to the engine per brake horsepower.

t_2 = Discharge water temperature.

t_1 = Intake water temperature.

"In applying the formula it is of course necessary to know t_2 for the operating condition of the engine and this is best obtained from the manufacturer. Where this value is not definitely known it can be assumed from 115° to 130° F. Although engines have been safely operated at temperatures higher than 130° F. the practice is not generally recommended. Outlet temperatures less than 115° should be avoided so far as possible for the reason that a greater quantity of water must be circulated to maintain the engine at this temperature than when higher values are used. Most engines do not run smoothly when the outlet water temperature is low and the point of best operation is usually found for temperatures ranging from 120° to 130° F.

"In choosing t_1 care must be taken not to make it too small. Since the difference between t_1 and t_2 is the B.t.u.'s each pound of water will absorb, it is evident that the greater the difference, the smaller the amount of water required. There is a practical limit to which this can be carried and under all ordinary conditions should not exceed 50°. This difference can be regarded as the temperature rise in the engine, or as the drop in the exchangers. Since we are interested in the best transfer that takes place within the exchanger the difference will be regarded as the temperature drop; t_1 and t_2 must therefore be reversed in meaning.

t_1 = Temperature of water incoming to exchanger.

t_2 = Temperature of water outgoing from exchanger.

"That amount of heat which is lost through radiation and conduction in the piping system cannot be predicted with any assurance and is therefore disregarded."

It is hoped that this will assist you in solving your problem, but it is recommended that you read all of Mr. Warterfield's paper on this subject for he offers many helpful suggestions on the design and installation of cooling systems for Diesels.

Depth and Extent of Wilcox Sand in the Pools of Creek County

My understanding is that the Wilcox sand was discovered in Creek County, Oklahoma. Can you tell me something about the extent of that sand in Creek County and the depths at which it is found in the various pools?—S. R. A.

Following is a record of the Wilcox sand in the various pools in Creek County, as reported in Bulletin 40, Oklahoma Geologiaal Survey:

Pool, township, range:	Top Wilcox (feet)	Thickness (feet)
Billingslea, 14-8	3,785	155
Bristow, 16-9	3,200	...
Continental, 16-9	3,300	46
Depew, 15-8	3,397	20
Donnelly, 14-10	3,240	50
Drumright, 17-7	2,800	20
Glenn Pool, 17-12-13	*2,100	10
Jennings, 19-20-7	3,260	...
Kellyville, 17-10	2,933-3,100	...
Keifer, 17-11-12	2,600	10
Mannford, 19-9	2,980	10
Mounds, 16-12	2,400	39
New York, 16-11	2,850	50
Oilton, 19-7	2,960	30
Olive, 18-7	3,480	...
Pemeta, 18-7	3,480	...
Poor Farm, 15-16-8	3,700	60
Prairie, 16-11	2,850	...
Pure, 15-8	3,715	40
Red Bank, 16-17-8	3,660	5
Sapulpa, 18-11-12	2,290	5
Scott, 16-10	2,925	...
Slick, 15-16-10	3,140	10
Stroud, 14-6-7	4,220	...
Tibbens, 15-9	3,680	5
Tuskegee, 14-10	3,472	10

*Sylvan.

Why Was It Called That?

ROPEWALK

Rope, whether of steel or manila, used in drilling oil wells is made now on machines, but until comparatively recent times all heavy rope was made on the ropewalk, and for certain kinds of cordage a modernized ropewalk still is used. The ropewalk was so called because in its old-fashioned form it consisted of a walk 1,000 to 1,400 feet long. With a bundle of hemp about his body the workman walked backward along this walk, making his yarn. The yarns later were twisted into strands and the strands into ropes. The first city directory of Pittsburgh, Pa., published in 1815, says: "There are three large and extensive ropewalks, which make all kinds of ropes, twine and cordage. The principal part of the cordage for Perry's Fleet was made here. Two cables weighed each about 4,000 pounds, and were 4½ inches in diameter."

Eastern Colorado Is Believed to Offer Oil and Gas Prospects

I am interested in the oil prospects of Colorado, especially the eastern part of the state. I shall be glad to get any information you can give me along this line. Is it not true that Colorado was one of the earliest oil-producing states? Has any geophysical work been done there?—L. E. N.

The oil prospects of eastern Colorado were discussed in detail by R. M. Van Tuyl, head of the department of geology in the Colorado School of Mines, and Ben H. Parker, consulting geologist of Golden, Colo., in a paper which the two presented before a joint annual convention of the Colorado Mining Association and the Colorado chapter of the American Mining Congress.

"The writers are convinced that additional pools will be discovered in the Cretaceous formation east of the mountains in Colorado," say these two geologists. "The possibilities of discovering commercial oil or gas pools in the Permian and older strata, particularly in the southeastern and extreme eastern parts of the State, are also considered to be very good.

"Upon referring to the oil and gas field map of Colorado and adjacent states, one is impressed with the importance of the producing areas to the north, east and south of the district in question. Although it is granted that conditions in eastern Colorado have not yet been demonstrated to be as favorable in all respects as those in adjacent areas even the most skeptical geologists must agree that there are undiscovered productive areas in the region.

"In the Julesburg Basin the most promising prospective areas are in the belt adjacent to the foothills and on the east limb of this structure. The depth of drilling near the axis of the trough is almost prohibitive at the present time in the light of known potentialities.

"The west flank of the basin has been thoroughly explored by geologists and no promising undrilled anticlines or domes are known to occur in this area. However, it is possible that additional accumulations of oil may be found in fissured Pierre shale similar to the occurrences at Florence and Boulder. Unfortunately, the location of such fissured areas cannot be predicted by the geologist or geophysicist in advance of drilling. It is also possible that accumulations of oil may be found on the east side of certain reversed faults which occur in the foothills belt.

"On the east flank of the Julesburg Basin favorable source bed and reservoir conditions are known to occur. The data bearing on structural conditions, however, are manifestly incomplete.

"The oil and gas possibilities of the southern portion of the Sierra Grande arch are limited almost entirely to the Permian and older horizons, in as much as the Dakota group is either exposed or only slightly buried over the greater part of this area. In view of the fact that these older formations carry oil and gas in commercial quantities in adjacent areas of Kansas, Oklahoma and Texas, it is believed that the potentialities of the area are considerable.

"The writers consider that there are possibilities of flank production on the Table Mesa and other structures of similar stratigraphic relations and that other structures developed over buried hills of less relief may yield oil and gas from reservoirs arched over topographic highs in the basement rocks."

PERSONAL PARAGRAPHS

DR. DONALD C. BARTON, consulting geophysicist, Houston, Tex., and his family have returned from a visit to Lafayette, La.

* * *

A. W. WEEKS, geologist for the Shell Petroleum Corporation, San Antonio, Tex., has been transferred to the Houston, Tex., office.

* * *

GEORGE DUNCAN, manager of the Tulsa store of the Waukesha Motor Company, has returned from Waukesha, Wis., where he spent a week visiting the factory.

* * *

HAROLD H. WILSON, general salesman for the Frick-Reid Supply Corporation in the East Texas Field, stopped for a short visit at the Tulsa offices on his way to Baldwin, Kans.

* * *

T. R. MILLER, south Texas branch manager of the Taubman Supply Corporation at Hebbronville, Tex., and FORD CARMAN, manager of the Seminole store, were recent visitors in Tulsa.

* * *

R. C. STAMETS, in charge of tubular goods sales for the Oil Well Supply Company, with headquarters in Dallas, Tex., left for Houston. He is making good progress in recovery from a recent illness and expects to come to Tulsa later this month.

* * *

W. R. COLVIN, of the Stanolind Oil & Gas Company, has been made personnel supervisor of the company, and L. E. JENNINGS, safety supervisor of the Stanolind Pipe Line Company, has been given additional duties of personnel supervisor.

* * *

E. E. GRIFFIN has been appointed sales manager for the Shell Oil Company in Montana vice J. M. ANDERSON, who has been transferred to the Pacific Coast. The sales headquarters will remain at Butte, Mont.

* * *

IRVINE E. STEWART, geologist for the Santa Rita Oil & Gas Company, with headquarters at Cut Bank, Mont., spent the holiday season with his family at Los Angeles, Calif. He made the trip by air from Great Falls, Mont.

* * *

C. P. PARSONS, Halliburton Oil Well Cementing Company, Duncan Okla., addressed the meeting of the Mid-Continent Section of the Petroleum Division of the A.I.M.E., on "Deep Well Cementing," on January 8, in Tulsa.

* * *

FRANK H. HOWARD, president of the Standard Oil Development Company, accompanied by MRS. HOWARD, left New York City, Saturday, January 6, on Saturnia of the Italian line. The liner is making a two weeks' cruise of the Caribbean.

* * *

F. B. BIMEL, O. B. HOPKINS and B. A. MYERS, of the International Petroleum Company, Toronto, Canada, left New York City, Friday, January 5, on the Santa Elena of the Grace line. The liner is bound for South American and California points.

* * *

G. H. VAN SENDEN, vice president of the Shell-Union Oil Corporation, made the front pages of New York City newspapers last week when with the aid of MRS. VAN SENDEN he outwitted a notorious gentleman burglar who entered their Park Avenue apartment. Mr. Van Senden recently came to New York from San Francisco where he was vice president of the Shell Oil Company of California.

J. R. GAHN, vice president of Tide Water Oil Company, Houston, Tex., spent the past week in Tulsa.

* * *

A. B. WEHLING, Hercules Motor Corporation, Canton, Ohio, stopped over in Tulsa on a trip through the Southwest.

* * *

C. OSICEANO, managing director of the Steaua Romana, S.A., has been re-elected president of the Rumanian Union of Chambers of Commerce and Industry.

* * *

H. O. DUKE, Galveston, Tex., sales representative of the International Creosoting & Construction Company, called on the oil country trade in Tulsa last week.

* * *

THEODORE A. MORGAN, independent oil producer of Wichita, Kans., has been appointed state oil umpire for Kansas to succeed Clifford H. Cooper. Mr. Morgan was with the White Eagle Oil Company for several years before entering the oil business as an independent. He has resided in Wichita, Kans., since 1915.

* * *

H. H. BURKE, retiring manager of the Edmonton, Alberta, division of the British American Oil Company, who has been promoted to the Saskatoon division, was honored at a banquet by the employes of the Edmonton division at which an electric clock was given to Mr. Burke and roses to MRS. BURKE. L. R. W. BOYD was chairman and introduced J. C. HALL, of Winnipeg, the new manager.

OTTO H. DITTMER, sales representative of Lee C. Moore & Company, has been confined to his home with an attack of intestinal flu.

* * *

HARRY OLIVER, independent operator, San Antonio, Tex., visited in Fort Worth, Dallas and East Texas on his way to Houston, Tex.

* * *

RICHARD FLINT, sales department, Birmingham Tank Company, Birmingham, Ala., was in Tulsa and vicinity for several days recently.

* * *

JOSEPH HORNBERGER, who has been a student at the University of Texas, Austin, has been selected as resident geologist for the Texas Company in the Tomball Field.

* * *

MR. AND MRS. E. L. DECKER announce the arrival on December 7 of a new daughter, Donna Mae. Mr. Decker is a member of the Martin-Decker Corporation, Long Beach, Calif.

* * *

E. KIRBY has been transferred from Fort Worth, Tex., to Houston, Tex., as division manager of sales, Sinclair Refining Company, to fill the vacancy caused by the death of JOHN R. HERR.

* * *

J. L. RISINGER, safety director of the Magnolia Petroleum Company, Dallas, Tex., has been named a member of the committee on accident prevention in marketing for the American Petroleum Institute. H. N. BLAKESLEE, head of the department of accident prevention for the institute with headquarters in Dallas, is secretary of the committee.

* * *

HENRY G. HUNT has been named executive secretary of the Oil and Gas Association of Michigan.

* * *

A. H. GARNER has retired as a member of the firm of Brokaw, Dixon, Garner & McKee, New York, which will hereafter be known as Brokaw, Dixon & McKee, continuing the practice of oil and gas engineering.

* * *

T. J. SPIKES, for a number of years connected with Phillips Petroleum Company, is now with FRED E. COOPER, of Tulsa, and will have headquarters at Wichita Falls, Tex., in charge of the Wichita Falls, Panhandle and Breckenridge districts.

* * *

DR. VIRGIL R. D. KIRKHAM, of Saginaw, Mich., vice president of the Oil and Gas Producers Association of Michigan, and chairman of the association's new proration committee appointed last week by HOWARD D. ATHA, president, and JAMES C. GRAVES, also of Saginaw, chairman of the Michigan Oil Regulatory Board, went to Washington, D. C., last week to lay before the Federal oil administration Michigan's request for a higher allowable.

* * *

G. V. AKERMAN, member of the administration board of the Russian oil industry, arrived in New York City, January 5. Mr. Akerman will take charge of the petroleum division of the Amtorg Trading Corporation with headquarters in New York. He succeeds A. A. SANTALOV, vice president of the Amtorg corporation, who will return to Russian where he will continue to be employed in the petroleum branch of the Soviet oil activities. He has been in charge of the petroleum division of the Amtorg in the United States for the past five years.

DO YOU REMEMBER?

From The Oil and Gas Journal Files

25 Years Ago

January 9, 1908

There are to be fewer wildeyed radicals in the present Oklahoma legislature than in previous ones, and the session, which opened January 6, is not viewed with so much alarm by oil men as some of the sessions of the past.

The noted economist, "Coin" Harvey, is president and manager of a club house and hotel company at Monte Ne, Ark., and in a recent Tulsa visit exacted promises from Joe Evans, Frank Louis, J. E. Crosbie, John O. Mitchell, Frank Moore and others to spend their 1909 vacations at his fox hunting resort.

W. L., A. W., and R. B. Mellon, of the Gulf Oil Corp., are looking over their Oklahoma holdings and will visit Texas properties before returning to Pittsburgh, Pa.

20 Years Ago

January 10, 1914

The Oklahoma Corporation Commission has issued an order fixing the price of 8 cents a gallon on refined products in the western part of Oklahoma. The price has been averaging 15 cents. This is said to be the first case where a state board attempted to fix the price of a commodity and the public wonders if the commission can get away with it.

Nebraska has a law on the statute books offering a reward of $15,000 for the first commercial oil well drilled in that State. It must produce 50 bbls. or more per day for a period of 60 days before the reward may be claimed. For a gas well, $4,000 is offered.

The production of crude oil in the United States in 1913 was 242,000,000 bbls., or 20,000,000 bbls. more than in 1912.

10 Years Ago

January 10, 1924

Prairie Oil & Gas Co. increases the price of Mid-Continent crude 25 to 50 cents per barrel, according to gravity, with 36 gravity crude receiving a 40-cent increase, or from $1 to $1.40 per barrel.

Production in the Powell Field, Texas, has fallen from 356,000 bbls. a day in September to 81,000 bbls. a day early in January.

The Salt Creek Field, Wyoming, is producing 125,000 bbls. per day.

Fred E. Watkins, pioneer operator in the Healdton, Oklahoma, Field, and president of the Iowa Oil & Refining Co., dies in Waurika, Okla.

President Coolidge calls R. W. Stewart, president of the Standard Oil Co. (Indiana), into a conference to discuss business and political conditions in the central states.

J. R. Munce is elected president of the Arkansas Natural Gas Co., succeeding J. C. Trees, who retired.

EUGENE STABINGER, a geologist who has spent 12 years in South America, has returned to New York.

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T. A. HULL, engineer, Tide Water Oil Company, Tulsa, has been making a trip of inspection through the East Texas fields.

* * *

E. M. SECOR, geologist, formerly with the Houston Oil Company, has joined the Skelly Oil Company with headquarters in Houston, Tex.

* * *

A. F. PRITULA, chief engineer of oil transport and oil storage for the U.S.S.R., Moscow, has been in Houston, Tex., studying pipe line and storage practices.

* * *

IRA N. CRAM, retiring president, Tulsa Geological Society, presented a paper on "A Study of Faults in Oklahoma," before the annual meeting of the society, January 8.

* * *

O. F. SUNDT, consulting geophysicist, Houston, Tex., addressed the Houston Geological Society at its last meeting on "Some Regional Trends in Coastal Southeast Texas."

* * *

W. ST. JOHN GARWOOD, of the Standard Oil Company of New Jersey, arrived in New York City, January 9, on the Grace liner, Santa Maria, from Beunos Aires, South America.

* * *

T. F. ROTHWELL, vice president of the Yount Lee Oil Company, and BEAMAN STRONG, attorney for the same company, both of Beaumont, Tex., were in Houston, Tex., on business.

* * *

R. W. McILVAIN, JR., Pure Oil Company, Tulsa, has been transferred to Houston, Tex., as assistant manager of the Gulf Coast division. CHASE E. SUTTON is manager of the division.

* * *

PAT ROONEY, of the Kansas City office of the Continental Can Company, was in Tulsa last week.

* * *

ROBERT W. DIERKER has returned to the Chicago office of the Gary Screw & Bolt Company after a visit to Tulsa.

* * *

R. B. NUCKOLS, of the St. Louis office of the Standard Tool Company, Cleveland, Ohio, was a recent visitor in Tulsa.

* * *

GEORGE W. PIRTLE, of Hudnall & Pirtle, Tyler, Tex., consulting geologist, is spending two weeks in Mount Pleasant, Mich.

* * *

S. L. ROTHENBERG, Kamen Iron & Metal Company, Wichita, Kans., called on oil company buyers in the Tulsa area during the past week.

* * *

ELLSWORTH KAUFFMAN, with the Sinclair Refining Company, at Nowata, Okla., has resigned to affiliate himself with the Skelly Oil Company, at Kansas City, Mo.

* * *

EARL J. BROBERG, engineer, the Parkersburg Rig & Reel Company, Tulsa office, was called to his home at Topeka, Kans., on Sunday, because of the sudden death of his father, JOHN BROBERG.

* * *

CLIFFORD MARTIN, of Bradford, Pa., has taken up the duties of acting secretary of the Bradford District Pennsylvania Oil Producers Association. He is well known throughout the industry in northern Pennsylvania and New York.

* * *

J. T. ELLIOTT of Wichita Falls, Tex., has been appointed to serve temporarily as chief deputy supervisor in the Oil and Gas Division of the Texas Railroad Commission, succeeding Leslie McKay, resigned. HARRY MILES, who has been assistant engineer in the East Texas area, has been appointed resident engineer for the commission in the East Texas Field to succeed GORDON GRIFFIN, also resigned.

Active Figure in Life of Houston

George A. Hill, Jr., as president of the Houston Oil Company of Texas, heads one of the oldest companies operating under a Texas charter. It has figured conspicuously in the development of that state and its properties extend into Arkansas, Oklahoma and New Mexico. Mr. Hill is also president of the Houston Pipe Line Company, having been chosen to head both of these companies in the fall of 1932. Previous to that he was director and executive vice president of the Houston Oil Company and a director of the Houston Pipe Line Company, having held the latter position since the inception of the company.

GEORGE A. HILL, JR.

Mr. Hill's connection with these organizations has come through the legal route. As an attorney he has been closely identified with the legal, industrial and official life of Houston for years. He has taken part in important civic movements and recently was active in the organization of the Texas Petroleum Council, which he sponsored as an agency in checking the illegal production of oil.

A member of a prominent Texas family, Mr. Hill was born in Corsicana, January 12, 1892. He attended public schools in Austin and Houston, the West Texas Military Academy in 1903-05, the Houston High School and the University of Texas, being graduated from the latter institution in 1911. He married Miss Mary Vandenberge in Victoria, Tex., in 1916.

During the World War Mr. Hill was captain of Troop C, Seventh Regiment, Texas Cavalry.

JOHN HICKS, formerly head of the Superior Oil Company's natural gas division in California, has entered the employ of the Petrol Company.

* * *

HARRY LE PAN, of the Wilson & Bennett Company, Chicago, called on oil company buyers in the Mid-Continent recently.

* * *

A. H. GOSSARD of the Dallas office of General Motors Truck Company, called on fleet owners in Tulsa and vicinity during the past few days.

* * *

H. L. SHEPARD, oil engineer of Los Angeles, Calif., is in Cheyenne, Wyo., where he is starting on an investigation of the operations of oil companies on state-owned oil and gas leases.

* * *

A. P. HOLLOWAY, district manager of the Dallas office of Jones & Laughlin Steel Corporation, was in Tulsa last week. In company with CARL SWINDLER, local J. & L. representative, he concluded a two-week trip through the territory.

* * *

G. E. FULSTOW, of the Anglo-American Oil Company, retired at the end of the year. Mr. Fulstow, who has been with the Anglo organization since its formation in 1888, is the liaison officer between the company and its numerous associated enterprises. He has seen longer service with the Anglo-American Oil Company than any member of the staff.

* * *

JOHN A. BROWN, who left California last week for New York, retains the presidency of General Petroleum Corporation together with his new duties as chairman of the executive committee of Socony-Vacuum. Mr. Brown took with him to the East a symbolic railroad ticket "to New York and return," issued by the company, on which were 11 destination coupons, each describing the positions he has held during his career. The presentation was made by R. M. KETCHUM at the close of a farewell dinner given at the Jonathan Club by the General Petroleum administrative staff, with nearly 100 attending.

LINN K. PARK, American Engineering Corporation, Houston, Tex., has been in Chicago on business.

* * *

JOHN G. STAUDT has been made West Texas manager of Dowell Chemical Company, of Midland, Mich. He will be located at Odessa.

* * *

C. SCHNURR, geologist in the Gulf Coast district for the Mid-Continent Petroleum Corporation, has been spending his vacation in Tulsa.

* * *

NORMAN SMITH, an independent operator of Tulsa, has been looking over the Gulf Coast territory, making Houston, Tex., his headquarters.

* * *

E. C. LOWRY, Shell Petroleum Corporation, Houston, Tex., has been made assistant division superintendent of production of the Gulf Coast division.

* * *

L. E. LEWIS, Pure Oil Company, has been placed in charge of the company's operations in the Louise Field, Wharton County, Texas. He was moved from the Van Field.

* * *

S. L. CRONIN, Pure Oil Company, has been transferred from Midland, Mich., to Houston, Tex., where he will have charge of the land and scouting departments.

* * *

R. W. (BOB) GARLAND, of San Antonio, Tex., independent oil operator, and the discoverer of the Greater Seminole Field, in Oklahoma, has been inspecting the territory around Houston, Tex.

* * *

DONALD HESELTON, of the Anglo-Ecuadorian Oil Company, arrived in New York City last week from Ecuador. Accompanied by MRS. HESELTON and two children, he is en route to his home in England.

* * *

M. J. EBERGART and H. M. NICHOLS, of the Chicago office of the American Can Company, were in Tulsa recently.

* * *

T. E. SWIGART, vice president, Shell Petroleum Corporation, Houston, Tex., has been in St. Louis, Mo., on business.

* * *

GLENN GARRETT, division land man for the Gulf Production Company at Fort Worth, Tex., has returned to that city after visiting his brother at Houston, Tex.

* * *

MRS. R. F. LINDSAY of Mount Pleasant, well-known club woman of Texas, has been named deputy collector of internal revenue and will be assigned to check oil taxes in the East Texas Field.

* * *

PAUL SABATIER, dean of the faculty of sciences of Toulouse University, Toulouse, France, has been awarded a Franklin Medal by the Franklin Institute, Philadelphia, for his contributions to chemistry, particularly his discoveries relating to the activity of the common metals in a finely divided condition. The results of his investigations have had direct application in the petroleum industry for decolorizing, sulphur removal and hydrogenation.

* * *

J. L. (JACK) DELLINGER, formerly assistant to the vice president of production, Shell Petroleum Corporation, at St. Louis, Mo., after a serious operation last spring, spent the remainder of the past year in northern Minnesota recovering his health and has just opened an office in the Petroluem Tower Building, Dallas, Tex., as an independent operator. His first work was with Kingwood Oil Company after the war. After several years in the Oklahoma and Arkansas fields he joined Roxana Petroleum Corporation in 1922 and had since been continuously with the Dutch-Shell in the Mid-Continent and Mexican organizations. He became general field superintendent, Dallas, Tex., 1925-26; production manager of La Corona and El Aguila, Tampico, 1926-29; and was assistant to the vice president of production at St. Louis from 1929 to 1932.

Fair Prices to Consumer and Industry to Result From Code Says C. B. Ames

By C. B. AMES
Chairman of the Board, Texas Co.

The following statement of the posted prices for 36 degree Mid-Continent crude and for East Texas crude from October 15, 1932, to date tells the story of the oil industry during that period:

36-36.9 Gravity Mid-Continent Crude

October 15, 1932	$1.04
December 15	.88
December 20	.69
January 19, 1933	.44
May 9	.25
June 19	.44
July 8	.54
August 25	.64
September 6	.74
September 8	.89
September 29	1.00
Today's price	1.00

All Gravities East Texas Crude

October 15, 1932	$1.10
December 15	.75
January 19, 1933	.50
April 24	.10
May 10	.25
June 19	.50
August 25	.60
September 6	.75
September 8	.90
September 29	1.00
Today's price	1.00

Between October, 1932, and January, 1933, the price structure was growing weaker and weaker, and by April had collapsed. This was because of excessive production quotas aggravated by illegal production in excess of allowables.

When the National Industrial Recovery Act was passed an opportunity was created to remedy the greatest defect in the situation by providing a nationwide control of production and an impartial allocation of the total as between the producing states. The industry immediately took steps to formulate a code which would accomplish this purpose and also improve the marketing and refining situation, and in June the draft of a code was prepared which was submitted to General Johnson in July. The preparation of this code gave promise of a more intelligent control of supply which was reflected by an advance in the price of crude in June. The hearings on the code in Washington in July and August gave further promise of stability which was reflected in the crude advances shown in the tables. The code was made effective by the President on September 2, and its administration has been gradually improving with a consequent improvement in the price of crude as indicated above. The year began under the most unfavorable circumstances but ended quite differently.

Benefits From Code

This industry has been in a peculiarly favorable position to receive the benefits of the National Industrial Recovery Act. It has been struggling with the problem of overproduction for the last seven years, during all of which time it has lacked the benefit of national legislation. Each of the principal oil-producing states has been pursuing its own conservation policy but the states have not been able to coordinate their activities on a national scale with the result that any one of three states, by failing to properly control its output, could destroy the market for the country as a whole.

The activities of the industry have been in definite recognition of the fundamental nature of demand and supply, and have been directed toward the objective of limiting supply so as to balance demand both in the interests of conserving an exhaustible and irreplaceable natural resource and of obtaining a fair price for its products. Under the code the Secretary of the Interior is authorized to fix the allowable for the United States as a whole in order to balance production with consumption, and to allocate this allowable as between the states. He has procured the co-operation of the Texas Railroad Commission and the Corporation Commissions of Oklahoma and Kansas and the producing agencies in other parts of the country in a fairly satisfactory manner, with the result that total production has been reduced from the high point by about 700,000 bbls. a day, and his order effective on January 1 fixes an allowable for the country as a whole at 2,183,000 bbls.

Earnings Show Improvement

During the year under the code wages have been increased and hours reduced. Relations between employers and employes in the industry are, in the main, quite satisfactory, although there have been a few labor troubles in certain localities. The earnings during the first six months were very unsatisfactory but the turn came in June and during the last half of the year earnings have been much improved. An excellent program for 1934 has been formulated by Secretary Ickes and the Planning and Co-ordination Committee of the industry. This program involves the limitation of current crude production to the requirements of the consumers, a small withdrawal from the excessive stocks which have accumulated, a regulation of the quantity and distribution of gasoline stocks, a plan for the handling and orderly distribution of distress gasoline, and an improvement in marketing practices.

When this program is made effective it will probably result in fair prices, both to the consumers and to the suppliers. The great bulk of the producers, refiners and marketers are supporting the program and at this moment it appears that 1934 will begin auspiciously.

Wildcat Operations in Louisiana-Arkansas

(Continued from Page 42)

Helena O. & G. Co.'s No. 2 Chambliss, 330 ft. S and E, NW cor. SW NE Sec. 20-9-13 ..... W.O.S.R. 1,955 ft.
Helena O. & G. Co.'s No. 1 E. K. Harris, 990 ft. S and W, C Sec. 10-9-13 ..... Fishing 1,955 ft.
R. P. Holland's No. 1 Harris, 587 ft. N, 530 ft. E, SW cor. SE NW Sec. 10-9-13 ..... Reaming 1,440 ft.
R. P. Holland et al's No. 1 A. J. Burkett, 990 ft. N, 330 ft. W of C, Sec. 10-9-13 ..... W.O.S.R. 1,850 ft.
Lanier & Rodgers' No. 1 Paul, 260 ft. N, 40 ft. E, SW cor. NW, Sec. 10-9-13 ..... Set 10-in. 44 ft.; drlg. 880 ft.
Miles & Strickland's No. 1 Ross & Son, 150 ft. N, 900 ft. E, SW cor. NW Sec. 10-9-13 ..... Drlg. 1,960 ft.
John W. Moffett's No. 1 Logan Oil Co., Sec. 3-9-13 ..... Using acid 1,985 ft.
Geo. W. Pace's No. 1 Quinn, 600 ft. E, 180 ft. S, NW cor. Sec. 10-9-13 ..... S.D. for cag. 1,410 ft.
Dr. C. R. Reed's No. 1 Allen, 495 ft. S, 600 ft. E, NW cor. Sec. 10-9-13 ..... Drlg. 6-in. plug. 1,470 ft.
J. D. Reynolds' No. 3 Paul est., 586 ft. N, 263 ft. W, SE cor. SW NE, Sec. 9-9-13 ..... Set 10-in. 38 ft.; drlg. 60 ft.
J. D. Reynolds' No. 1 Paul est., 291 ft. N, 738 ft. W, SE cor. SW NE Sec. 9-9-13 ..... Set 6-in. 1,752 ft.
W. H. Rowe et al's No. 1 Craig, 330 ft. S and E, of center Sec. 22-9-13 ..... Set 10-in. 40 ft.
Sabine Royalties Co.'s No. 1 Graham, 330 ft. N and E SW cor. NW, Sec. 20-9-13 ..... Set 10-in. 40 ft.; drlg. 1,100 ft.
J. B. Williams' No. 1 Tatum, 330 ft. N and W, SE cor. NW SE Sec. 32-9-13 ..... Rigging up.
Windsor Oil Co.'s No. 2 Barr, 330 ft. N and E, SW cor. NW Sec. 15-9-13 ..... Location.
Winn & Caviness' No. 1 Paul est., 330 ft. N, 42 ft. W, SE cor. NW Sec. 9-9-13 ..... Set 10-in. 100 ft.

SABINE—ZWOLLE

H. C. Maulding's No. 1 Alford, 330 ft. S and W, NE cor. NW NW Sec. 18-7-10 ..... Derrick.
H. C. Maulding's No. 1 Van Vickhaven, 330 ft. N and W, SE cor. NE Sec. 3-7-11 ..... Drlg. 1,910 ft.

WEBSTER PARISH

J. P. Evans' No. 1 Crichton, 350 ft. N and W, SE cor. NE SW, Sec. 34-18-9 ..... Rigging up.

WINN PARISH

Allen & Wright's No. 1 Price, Sec. 9-2-3w ..... S.D. 460 ft.

Arkansas

CONWAY COUNTY

Sou. Union Gas Co.'s No. 1 Feldman, C SW SW Sec. 6-6-17 ..... Drlg. 2,500 ft.

JEFFERSON COUNTY

J. E. Elliott's No. 1 B. V. Nevin, 440 ft. N and E, SW cor. SW NW Sec. 26-4-10 ..... Rigging up.

HEMPSTEAD COUNTY

A. H. Bagnelle's No. 1 Trattner & Rhinehart, Sec. 3-13-26 ..... Pulling liner to deepen 945 ft.

LAFAYETTE COUNTY

Douglas Lawn's No. 1 Camp, 330 ft. S and W, NE cor. SW SE Sec. 14-15-23 ..... Set 10-in. 52 ft.
George W. Harper's No. 2 Bodcaw, 150 ft. S, 550 ft. E NW cor. SW NW Sec. 16-15-22 ..... Arranging to test 1,216 ft.

MILLER COUNTY

Black Diamond Oil Co.'s No. 1 Miller Land Co., Sec. 29-18-27 ..... Drlg. 2,820 ft.
Duluth-Ark. Oil Co.'s No. 2 Beck, 330 ft. S and E, NW cor. SE SW Sec. 34-15-26 ..... Testing 2,807 ft.
Fitzwater et al's No. 1 Norsbn, SW cor. SE SW Sec. 20-15-27 ..... Set 6⅝-in. 2,978 ft.; T.D. 3,008 ft.
C. E. Murdock's No. 1 Rose, Sec. 4-16-26 ..... W.O.S.R. 2,941 ft.
C. E. Murdock's No. 1 Smith (formerly Baker & McMurray), 150 ft. N and W, SE cor. SE SW Sec. 33-15-26 ..... Set 6⅝-in. 2,920 ft.
Frank W. Roe's No. 1 Dominick, 330 ft. S and E, NW cor. NW NW Sec. 31-15-26 ..... S.D. 2,830 ft.; repairing rig.
Texarkana Oil Corp.'s No. 2 E. L. Beck, 340 ft. N, 450 ft. E, SW cor. SW SE Sec. 33-15-26 ..... Set 6⅝-in. 2,928 ft.
Lee Timberlake's No. 1 B. F. Smith, 150 ft. N and W, SE cor. NE SW Sec. 33-15-26 ..... Drlg. 2,600 ft.

OUACHITA COUNTY

F. G. Harrell's No. 1 Poindexter, 330 ft. S and E NW cor. Sec. 35-15-18 ..... S.D. 2,390 ft.
L. L. McDonald's No. 1 J. A. Robertson, 200 ft. S and E, NW cor. NE NW Sec. 25-15-16 ..... Set 6⅝-in. 2,018 ft.

UNION COUNTY

D. S. Brock's No. 1 Murphy Land Co., 330 ft. S and E, NW cor. NW NE Sec. 34-19-15 ..... Drlg. 2,315 ft.
E. R. Henderson's No. 2 J. H. Ogden, 330 ft. S and E, NW cor. SW SE Sec. 32-18-14 ..... W.O.S.R. 2,208 ft.
E. R. Henderson's No. 1 Vines, 330 ft. N and W, SE cor. SW SE Sec. 29-18-14 ..... Coring 2,164 ft.
Marine Oil Co.'s No. 2 Union Sawmill Co., 330 ft. S and E, NW cor. SE SE Sec. 3-18-13 ..... W.O.S.R. 3,562 ft.
Sam M. Richardson Oil Co., Inc.'s No. 1 Hammond, 330 ft. S and E, NW cor. SE NE Sec. 19-17-15 ..... Coring 2,156 ft.
Chas. Steele's No. 1 J. B. Combs, 150 ft. N, 185 ft. W, SE cor. SW NW Sec. 25-18-16 ..... Rigging up.

Mississippi

MADISON COUNTY

H. A. Wilson, tr.'s No. 1 Copex, 200 ft. N and E, SW cor. SW NE Sec. 24-8-3e ..... S.D. 2,340 ft.

NEWTON COUNTY

Bod Dalton et al's No. 2 Majura, SE SE Sec. 26-6-11 ..... Drlg. 3,300 ft.

SIMPSON COUNTY

Beavy Corp.'s No. 1 R. J. Beavy, C SW Sec. 33-3n-4e ..... Drlg. 2,325 ft.

TALLAHATCHIE COUNTY

R. E. Collins et al's No. 1 Bunton, SE NE Sec. 23-26n-3e ..... S.D. 2,228 ft.

WALTHALL COUNTY

Mutual O. & G. Co.'s No. 1 Boyd, Sec. 24-2n-9e, SW cor. SW SE ..... Moving in rig.

WARREN COUNTY

Orbet Drlg. Co.'s No. 1 R. L. Parker, 300 ft. E, CWL, Sec. 14-14-1e ..... S.D. for fuel 2,417 ft.

Louisiana-Arkansas Proven Areas

North Louisiana

CADDO PARISH—BLANCHARD

Company, well, farm name, section and block—	Remarks:
Louana O. & G. Co.'s No. 2 Hammock, C SW SE Sec. 32-19-16	Comp. 12,000,000 ft. gas 2,757 ft.

CADDO—RODESSA

R. W. Norton's No. 1-B J. B. French, 660 ft. S and E, NW cor., Sec. 34-23-16 ..... Drlg. 5,156 ft.

MOREHOUSE PARISH

United Carbon Co.'s No. 1 Montgomery, 1,339 ft. S, 2,268 ft. E of C Sec. 9-21-5I ..... Drlg. 2,350 ft.

OUACHITA PARISH

Hatcher & Evans' No. 10 Hatcher, Sec. 17-19-4 ..... Drlg. 610 ft.
Maury Drlg. Co.'s No. 6 McEwen, 3,300 ft. E, 10 ft. S, NW cor. SW Sec. 29-19-4e ..... Drlg. plug 2,143 ft.

SABINE PARISH—ZWOLLE

Baird Bros.' No. 1 Cooper, 330 ft. S and W, NE cor. SE Sec. 30-8-11 ..... Set 10-in. 40 ft.
Dyer et al's No. 1 McCollister, 330 ft. S and E, NW cor. SW NE Sec. 24-7-12 ..... Moving in rig.
Warren G. Gray's No. 1 Nulton, 2,970 ft. W, 330 ft. S, NE cor. Sec. 2-7-13 ..... Plugged back to 2,435 ft.
Magnolia Pet. Co.'s No. 2 Lilley, Sec. 8-7-11 ..... Set 12½-in. 40 ft.; Set 6-in. 2,360 ft.
Magnolia Pet. Co.'s No. 1 Semon Lilly, NE cor. SE NW Sec. 8-7-11 ..... Treating with acid 2,590 ft.
Magnolia Pet. Co.'s No. 2 Gindratt, 330 ft. N, 320 ft. E, SW cor. SE Sec. 30-8-11 ..... Bailing 2,485 ft.
L. C. McGuffin's No. 2 Chaddick, Sec. 5-7-10 ..... Set 10-in. 41 ft.; drlg 450 ft.
Pelican Nat. Gas Co.'s No. 27 La. Long Leaf Lbr. Co., 618 ft. N, 330 ft. W, SE cor. SW SW Sec. 29-8-11 ..... Comp. flowing 500 bbls. 2,418 ft.
Pugh-Hickman's No. 8 Stille, 330 ft. S and E, NW cor. Sec. 16-7-11 ..... Dry and abd. 2,749 ft.
C. T. Ruffin's No. 1 McNeely, 510 ft. S, 330 ft. W, NE cor. NE NE Sec. 7-7-11 ..... Using acid 2,550 ft.
L. J. Tillery's No. 1 Sabine Lbr. Co., 800 ft. S, 220 ft. W, NE cor. Lot 3, La. Nava grant, Sec. 5-7-11 ..... Using acid 2,475 ft.

Mississippi

HINDS COUNTY

B. B. Jones' No. 1 McRae, 530 ft. W, 540 ft. N, SE cor. SW NW Sec. 34-7n-1w ..... Dry and abd. 3,990 ft.
B. B. Jones' No. 1 Stone, 500 ft. S, 100 ft. E, NW cor. Sec. 18-5n-3e ..... Drlg. 3,936 ft.
Muse & Weaver's No. 1 Sellers, 660 ft. N, 330 ft. W, SE cor. SW NE Sec. 26-6n-1e ..... Reaming 2,462 ft.

RANKIN COUNTY

Ferguson, Fuller & Metz' No. 1 Ammons, 350 ft. E and S, NW cor. NW NW Sec. 35-3n-3e ..... Partly rigged up and S.D.
Cleve Love et al's No. 1 Thomas, SW Sec. 10-4-1e ..... Set 7-in. 4,770 ft.

East Texas (Border Counties)

PANOLA COUNTY

W. H. Nichols et al's No. 1 S. W. Ray, 330 ft. S of N line, 330 ft. W of E line, W. P. Culver Sur. ..... Fishing 1,850 ft.
M. H. Robbins et al's No. 1 Alzee Williams, 165 ft. N and E, SW cor. 30-ac. tract in Winnie Mann Sur. ..... Coring 2,109 ft.

Wildcat Operations in Gulf Coast

(Continued from Page 52)

Yount Lee Oil Co.'s No. 19 Smith, Martin Dunman Sur., 150 ft. N at R/A from center of line between 14 and 15 ..... Drlg. shale 5,407 ft.

Yount Lee Oil Co.'s No. 20 Smith, 1,210 ft. from W line, 1,790 ft. from N line of 200-ac. tract, Dunman Sur. ..... Drlg. lime 3,509 ft.

ARRIOLA—HARDIN COUNTY

Republic-Houston Oil Co.'s No. 6 Arriola fee, 2,150 ft. S of N line, 5,050 ft. E of W line of lease, Arriola Sur. ..... Drlg. sand 4,708 ft.

BATSON—HARDIN COUNTY

Danciger O. & R. Co.'s No. 3 Hooks, W. Donoho Sur., 330 ft. E of CWL, Blk. 24 ..... T.D. 4,495 ft.; reaming 4,026 ft.

SARATOGA—HARDIN COUNTY

Rio Bravo Oil Co.'s No. 105 Jordit fee, 50 ft. due N of No. 94 ..... Drlg. 450 ft.

Seismo Oil Co.'s No. 1 Caswell, 940 ft. S of NW cor. and 600 ft. from E line, H.B.B.&C. Sur. ..... Drlg. sand 3,175 ft.

SOUR LAKE—HARDIN COUNTY

Arlis Pet. Co.'s No. 1 Sour Lake Bank, H.&T.C. Sur., NW cor. Blk. 11, Sec. 49 ..... T.D. 2,050 ft.; standing.

GOOSE CREEK—HARRIS COUNTY

H. J. De Arman's No. 1 Aday, W. Scott Sur., 505 ft. from W, 130 ft. from S line of lease ..... Drlg. shale 3,258 ft.

McPhail & Atkins' No. 1 Harral, Wm. Scott League, 400 ft. W and N from Humble's No. 1 Harral..... Rigging.

HUMBLE—HARRIS COUNTY

Marshall & Drake's No. 1 Wheeler-Pickens, Stevenson Sur., 50 ft. from W line, 130 ft. from S line, Blk. 26 (W.O.) ..... No report.

PIERCE JUNCTION—HARRIS COUNTY

Harrison & Abercrombie's No. 4 Ridder, J. Hamilton Sur., 50 ft. W of No. 3 ..... Drlg. sand 4,305 ft.

Rio Bravo Oil Co.'s No. 16-A Settegast, 620 ft. W, 329 ft. N, SE cor. J. Kopman Sur. (W.O.) ..... T.D. 4,295 ft.; pulling screen.

TOMBALL—HARRIS COUNTY

Amerada Pet. Corp.'s No. 1 Bode, J. Hooper Sur., 686 ft. from E and W lines, 320 ft. from S line of lease. Drlg. shale 6,340 ft.

Amerada Pet. Corp.'s No. 1 Nelson, 466 ft. from S line, 410 ft. from W line, Joseph House Sur. ..... T.D. 5,584 ft.; flowing into pits; no gauge.

Amerada Pet. Corp.'s No. 1 Otto-Rudel, J. House Sur., 318 ft. from N line, 466 ft. from E line ..... T.D. 5,582 ft.; cmtd. csg.

Amerada Pet. Corp.'s No. 2 Otto Rudel, 466 ft. from N line, 500 ft. from W line of tract, J. House Sur. Drlg. shale 5,164 ft.

Humble O. & R. Co.'s No. 1 Moody, 466 ft. E, 466 ft. S of NW cor. 100-ac. tract, J. H. Edwards Sur. ... Drlg. shale 3,963 ft.

Humble O. & R. Co.'s No. 2 Quilter, A. Senechal Sur., 933 ft. E of No. 1 and 466 ft. from E line ..... Drlg. sand 5,558 ft.

Humble O. & R. Co.'s No. 1 Schearer, 466 ft. S line, midway E and W of 56-ac. tract, C. Goodrich Sur... Drlg. shale 2,110 ft.

Humble O. & R. Co.'s No. 1 W. Theis, J. H. Edwards Sur., 1,399 ft. N line, 466 ft. W line of lease ..... Comp. 15 bbls. per hour; ¼-in. choke, 5,617 ft.

Humble O. & R. Co.'s No. 1 Weindorf, 435 ft. W line, 500 ft. from S line of lease, C. Goodrich Sur. ..... Drlg. shale 1,200 ft.

Skelly Oil Co.'s No. 1 Schultz, J. H. Edwards Sur., 456 ft. from S line, 404 ft. from E and W lines ..... Derrick.

Standard O. & G. Co.'s No. 1 Brautigan, 466 ft. from N line and 575 ft. from E and W lines of tract, N. Anderson Sur. ..... Drlg. shale 1,074 ft.

Stanolind O. & G. Co.'s No. 2 Theis, J. H. Edwards Sur., 466 ft. N, 404 ft. W of SE cor. of lease..... T.D. 5,543 ft.; flowed 30 minutes, then went dead.

Stanolind O. & G. Co.'s No. 3 Theis, J. H. Edwards Sur., 345 ft. S of N line and 466 ft. E of W line .... Drlg. shale 3,631 ft.

Texas Co.'s No. 3 E. Mueller, 658 ft. W and 1,889 ft. N of SE cor. of tract ..... Drlg. shale 2,822 ft.

Texas Co.'s No. 1 E. Hillequist, 515 ft. W, 466 ft. N of SE cor. of 100-ac. tract, Joseph House Sur. ..... T.D. 5,589 ft.; comp. 7,000,000 ft. of gas.

Windsor Oil Co.'s No. 1 Petrick, J. H. Edwards Sur., 467 ft. from N and E lines of tract ..... Drlg. shale 5,499 ft.

ESPERSON—LIBERTY COUNTY

General Crude Oil Co.'s No. 7 Davis (W.O.), Duncan Sur. T.D. 7,510 ft.; D.S. stuck; fishing.

General Crude Oil Co.'s No. 13 Esperson, C. W. Fisher Sur., 400 ft. S of No. 7 (W.O.) ..... No report.

HULL—LIBERTY COUNTY

Gulf Prod. Co.'s No. 1 Briggs, 50 ft. each way from NE cor. of lease, J. Devore Sur. ..... Drlg. shale 4,224 ft.

Gulf Prod. Co.'s No. 94 Phoenix, 50 ft. each way from most westerly SW cor. J. Devore Sur. ..... Comp. 1,000 bbls.; 4/16-in. choke, 4,298 ft.

Hannah Oil Co.'s No. 1 Hannah, J. Devore Sur. (W.O.).. Derrick.

Hannah Oil Co.'s No. 2 Hannah, J. Devore Sur. ..... Derrick.

Humble O. & R. Co.'s No. 31 Hooks-Guedry, J. Devore Sur., 250 ft. from S, 150 ft. from W line of lease ..... Drlg. shale 3,010 ft.

Humble O. & R. Co.'s No. 33 Hooks-Guedry, J. Devore Sur. ..... Drlg. shale 3,415 ft.

Miramar Oil Corp.'s No. 2-B Phoenix ..... Comp. 1,000 bbls.; ¾-in. choke, 5,108 ft.

Sun Oil Co.'s No. 2-A Carr, 197 ft. W of No. 1, Jesse Devore Sur. ..... Drlg. shale 4,241 ft.

Republic Prod. Co.'s No. 150 Dolbear, J. Devore Sur., 250 ft. E of No. 81 ..... Rigging.

Texas Co.'s No. 5 Barrow fee, J. Devore Sur., 533 ft. S, 150 ft. W of NE cor. of lease ..... Drlg. shale 4,747 ft.

Yount Lee Oil Co.'s No. 4 Hooks-Sterling, J. Devore Sur., 150 ft. S of N line, 535 ft. W of E line of lease.. Comp. 1,281 bbls.; ¾-in. choke, 4,920 ft.

Yount Lee Oil Co.'s No. 5 Hooks fee, 200 ft. E, 50 ft. N of S line of lease, J. Devore Sur. ..... Rigging.

Yount Lee Oil Co.'s No. 6 Hooks fee, 50 ft. from N, 150 ft. from E line of lease, J. Devore Sur. ..... Drlg. shale 3,770 ft.

LIBERTY FIELD—LIBERTY COUNTY

Ross Oil Co.'s No. 1 Richardson, M. G. White Sur., 120 ft. E of Gulf-Humble's No. 1 Carter ..... Derrick.

CONROE—MONTGOMERY COUNTY

Alpha Pet. Co.'s No. 2 Crowe, S. H. Bryan Sur. ..... Comp. 40 bbls. per hour; ¾-in. choke, 5,118 ft.

Alpha Pet. Co.'s No. 2-B Krohn, Stephen Bryan Sur. .. Rig.

Alpha Pet. Co.'s No. 2 South Tex. Dev. Co., W. A. McGowen Sur., 248 ft. S line, 480 ft. W line ..... Rig.

Feltex Oil Co.'s No. 1-B South Tex. Dev., L. Smith Sur., 571 ft. W line, 467 ft. S line of tract ..... Derrick.

Gulf Coast Drlg. & Prod. Co.'s No. 2 J. L. Hensley, A. Steele Sur., 466 ft. S line in center E and W of strip ..... Derrick.

Gulf Coast Drlg. & Prod. Co.'s No. 12 Keystone Mills, A. James Sur., 467 ft. W line, 933 ft. S of No. 11.. Derrick.

Gulf Coast Drlg. & Prod. Co.'s No. 14-A Keystone Mills, A. James Sur., 840 ft. W of No. 3 ..... Drlg. 1,206 ft.

Gulf Coast Drlg. & Prod. Co.'s No. 15-A Keystone Mills, A. James Sur., 850 ft. W of No. 14 ..... Derrick.

Gulf Coast Drlg. & Prod. Co.'s No. 19-A Keystone Mills, A. S. James Sur. ..... Drlg. shale 2,230 ft.

Gulf Coast Drlg. & Prod. Co.'s No. 29-A Keystone Mills, A. S. James Sur. ..... Derrick.

Gulf Oil & Sulphur Co.'s No. 2 Springfield, J. S. Springfield Sur., 466 ft. from SW line, 100-ac. lease ..... Derrick.

Humble O. & R. Co.'s No. 4-R Cartwright, J. A. Davis Sur. ..... Drlg. shale 4,682 ft.

Humble O. & R. Co.'s No. 17 Madeley, Ransom House Sur. ..... Drlg. shale 2,900 ft.

Humble O. & R. Co.'s No. 33 Madeley, Ransom House Sur. ..... Drlg. shale 2,565 ft.

Humble O. & R. Co.'s No. 1-F Alexander (relief well).. Drlg. shale 5,070 ft.

Humble O. & R. Co.'s No. 13-A Cartwright, J. A. Davis Sur. ..... Cmtd. csg. 5,154 ft.

Humble O. & R. Co.'s No. 1 American Natl. Bank .... Drlg. sand 5,127 ft.

Humble O. & R. Co.'s No. 44 Moore, Lemuel Smith Sur... Comp. 92 bbls. per hour; ½-in. choke, 5,127 ft.

Humble O. & R. Co.'s No. 45 Moore, L. Smith Sur., 842 ft. E of No. 46 ..... Spudding.

Humble O. & R. Co.'s No. 3 A. Morehead, Trevathan Sur.. Derrick.

Humble O. & R. Co.'s No. 7 Rooker ..... Drlg. shale 4,250 ft.

Humble O. & R. Co.'s No. 29-A South Tex. Dev. Co., T. Slade Sur. ..... Comp. 6 bbls. per hour; ½-in. choke, 5,198 ft.

Humble O. & R. Co.'s No. 55 So. Tex. Dev., T. Slade Sur., 933 ft. E of No. 54 ..... Drlg. shale 3,703 ft.

Humble O. & R. Co.'s No. 60 South Tex. Dev. Co., T. Slade Sur. ..... Drlg. shale 975 ft.

Humble O. & R. Co.'s No. 4-C South Tex. Dev. Co. .... Comp. 67 bbls. per hour; ½-in. choke, 5,168 ft.

Humble O. & R. Co.'s No. 5-C South Tex. Dev. Co., T. Slade Sur., 700 ft. SW of No. 4-C ..... Drlg. shale 970 ft.

Humble O. & R. Co.'s No. 1-G So. Tex. Dev. Co. ..... Drlg. shale 4,667 ft.

Pine Tree Oil Co.'s No. 1 South Tex. Dev. Co., T.&N. O. Sur. No. 13, 1,600 ft. W line, 810 ft. S line of Sur.. Drlg. shale 4,530 ft.

Strake Pet., Inc.'s No. 5 Krohn, S. H. Bryan Sur., 717 ft. W of No. 3 ..... Drlg. shale 5,068 ft.

Sun Oil Co.'s No. 8 Keystone Mills, A. Steele Sur., 1,030 ft. S of No. 9 ..... Shale 5,142 ft.

Sun Oil Co.'s No. 32 Foster ..... Derrick.

Sun Oil Co.'s No. 10 Keystone Mills, A. Steele Sur. .... Derrick.

Sun Oil Co.'s No. 3 McDonald, W. Strickland Sur., 350 ft. N, 840 ft. E of No. 1 ..... Shale 5,115 ft.

Texas Unity Oil Co.'s No. 1-B Allen ..... Drlg. shale 5,060 ft.

Tide Water Oil Co.'s No. 2 American Natl. Bank, W. Strickland Sur., 250 ft. N, 200 ft. E line of lease... Drlg. shale 5,025 ft.

Tide Water Oil Co.'s No. 2 Amer. Natl. Bank, 200 ft. S, 466 ft. E line of tract, W. Strickland Sur. ..... Drlg. shale 1,040 ft.

Tide Water Oil Co.'s No. 14 Dean, 330 ft. N line and 1,650 ft. from W line of lease ..... Drlg. shale 1,568 ft.

Tide Water Oil Co.'s No. 8 Krohn, 330 ft. from S and E lines, S. H. Bryan Sur. ..... Drlg. shale 4,502 ft.

Tide Water Oil Co.'s No. 30 Lewis, C. B. Stewart Sur., 1,973 ft. E, 1,493 ft. S line of lease ..... Comp. 75 bbls. per hour; ½-in. choke, 5,127 ft.

Tide Water Oil Co.'s No. 31 Lewis, C. B. Stewart Sur., 3,029 ft. N, 1,933 ft. E line of lease ..... Comp. 63 bbls. per hour; ½-in. choke, 5,112 ft.

ORANGE—ORANGE COUNTY

Gulf Prod. Co.'s No. 12 Hager-Moore (W.O.) ..... Drlg. shale 6,178 ft.

PORT NECHES—ORANGE COUNTY

Texas Co.'s No. 2-B Polk, 695 ft. N, 150 ft. S of NE cor. of N. Jacob Beaumont Sur. ..... Drlg. sand 4,321 ft.

Texas Co.'s No. 4 Kuhn, 150 ft. E, 150 ft. N of NW cor. of lease ..... Comp. 555 bbls. in 20 hrs.; ½-in. choke, 4,802 ft.

Texas Co.'s No. 5 Kuhn, 693 ft. from E line, 150 ft. from N line of SE cor. of lease, M. Hall No. 2, T. J. Notgrass Sur. ..... Comp. 1,500,000 ft. of gas ¼-in. choke, 3,289 ft.

LIVINGSTON—POLK COUNTY

Vick Borsodi et al's No. 1 West, E 3½ acres of 35 acres, Roberts tract A. Viesca Sur. ..... T.D. 4,370 ft.; P.B. to 4,366 ft.

Gist Oil Co.'s No. 1 Kingsbury County Holding Corp., A. Viesca Sur., 150 ft. N at R/A and 193 ft. E along S line of tract ..... Drlg. shale 4,268 ft.

Harrison & Abercrombie's No. 3 Carter, 466 ft. S and W of NW cor. Shell 80-ac. Jones lease ..... Abd. 4,435 ft.

Humble O. & R. Co.'s No. 7 Grandbury, 540 ft. NE, 404 ft. NW at R/A from NW cor. R. H. Jones (110-ac.) ..... Abd. location.

Humble O. & R. Co.'s No. 8 Grandbury, 466 ft. from NE line, 466 ft. from NW line, Sec. 14, A. Viesca Sur. ..... Drlg. shale 4,008 ft.

Polk County Oil Co.'s No. 3 Allen Highbarger, 330 ft. E of W line and 464 ft. N of S line, A. Wiesca Sur.. Drlg. shale 3,283 ft.

Shell Pet. Corp.'s No. 1 J. Duff, 438 ft. NW, 33 ft. NE lines of lease, A. Viesca Sur. ..... T.D. 4,587 ft.; P.B. to 4,389 ft.; comp. 3,500,000 ft. through tubing, 4,304 ft.

GRETA—REFUGIO COUNTY

Atlantic Oil Prod. Co.'s No. 4-A O'Brien, 466 ft. S line, 933 ft. E of No. 2, M. J. Ximines Sur. ..... Comp. 196 bbls.; 3/16-in. choke, 4,395 ft.

Atlantic Oil Prod. Co. et al's No. 5-A J. J. O'Brien, 933 ft. E of No. 3-A, 466 ft. S of N line ..... Derrick.

Atlantic Oil Prod. Co.'s No. 2-B J. J. O'Brien, 466 ft. each way from SE cor. of 50-ac. lease, N. S. Crunk Sur. ..... Drlg. shale 2,640 ft.

Atlantic Oil Prod. Co.'s No. 2-J O'Brien, 466 ft. from SE cor. J. H. Peoples Sur. ..... Drlg. lime 4,245 ft.

Atlantic Oil Prod. Co.'s No. 2 Heard, 933 ft. E of No. 1, center N and S, J. H. Peoples Sur. ..... Comp. 195 bbls.; ¾-in. choke, 4,392 ft.

Blanco Oil Co.'s No. 3-A J. J. O'Brien, N. S. Crunk Sur. ..... Drlg. shale 2,750 ft.

Circle W Oil Co.'s No. 5 O'Brien, E. H. Winfield Sur., 795 ft. S of No. 6 ..... Drlg. 1,306 ft.

Circle W Oil Co.'s No. 6 O'Brien, 398 ft. N, 466 ft. E lines of lease, E. H. Winfield Sur. ..... Drlg. sand 4,397 ft.

Dash Prod. Co.'s No. 2-E O'Brien, N. S. Crunk Sur., 466 ft. N of SE line, center E and W of tract .... Drlg. shale 2,938 ft.

Floboots Oil Corp.'s No. 1 M. C. Bauer, 330 ft. N line, 1,724 ft. from W line, J. M. Ximines Sur. ..... Drlg. shale 2,943 ft.

Humble O. & R. Co.'s No. 2 Heard, 466 ft. S of most southerly N line, 303 ft. E of most westerly line, N. S. Crunk Sur. ..... Drlg. sand 4,393 ft.

Humble O. & R. Co.'s No. 1 J. E. B. Heard, 466 ft. from SW cor. 500-ac. tract, J. H. Peoples Sur. ..... Drlg. shale 2,989 ft.

Humble O. & R. Co.'s No. 1 Wilder, 466 ft. S line, 313 ft. E line, J. T. McGrew Sur. ..... Drlg. shale 1,248 ft.

Edwin M. Jones' No. 5-A J. M. O'Brien, N. S. Crunk Sur., 933 ft. E of No. 4 ..... Drlg. shale 1,170 ft.

Edwin M. Jones' No. 6 O'Brien, N. S. Crunk Sur., 1,399 ft. from E line, 466 ft. from S line of tract..... Derrick.

Edwin M. Jones' No. 7 O'Brien, N. S. Crunk Sur. ..... Derrick.

Edwin M. Jones' No. 8-A O'Brien, N. S. Crunk Sur., 466 ft. W of E line, 1,629 ft. N of S line of lease.. Drlg. clay 300 ft.

Nesral Oil Co.'s No. 1 Ira Heard, M. J. Ximines Sur., 330 ft. out of NW cor. of 25-ac. tract ..... Drlg. shale 6,360 ft.

Nesral Oil Co.'s No. 1 V. E. Heard, 466 ft. N line, 266 ft. W line, M. J. Ximines Sur. ..... No report.

Nesral Oil Co.'s No. 3 W. Heard, 710 ft. W line, 1,510 ft. N line of lease, M. J. Ximines Sur. ..... Derrick.

Southwest Oil Corp.'s No. 4-B O'Brien, N. S. Crunk Sur., 466 ft. N of S, 466 ft. E of W line of lease.. Drlg. sand 4,378 ft.

Standard of Kansas' No. 1 O'Conner, 466 ft. from N line, center E and W of lease, N. S. Crunk Sur. .. Comp. 11 bbls. oil, and gas; ½-in. choke, 4,393 ft.

Stanolind-Atkins' No. 1 Welder, 466 ft. S line, 313 ft. W line of 300-ac. tract, J. T. McGrew Sur. ..... Sand 4,379-99 ft.; comp. flowing 30 bbls. per hr.; 5/16-in. choke.

Stanolind O. & G. Co.'s No. 1 J. M. O'Brien (Blk. 11), E. H. Winfield Sur., 500 ft. from E line, 466 ft. from S line ..... Drlg. shale 1,459 ft.

Stanolind O. & G. Co.'s No. 1 J. M. O'Brien (Blk. 13), E. H. Winfield Sur., 466 ft. from S line, 500 ft. from E line ..... Drlg. shale 895 ft.

Trinity Drillers' No. 1 Welder, J. T. McGrew Sur., 466 ft. from S and W lines, J. F. Welder 200-ac. tract.. Drlg. shale 4,973 ft.

United Prod. Co.'s No. 11 Fox, 867 ft. NE of No. 10, Hews & Brown Sur. ..... T.D. 4,395 ft.; comp. 420 bbls.; ¾-in. choke.

United Prod. Co.'s No. 12 Fox, 1,450 ft. NW of No. 11, Hews & Brown Sur. ..... Drlg. shale 2,710 ft.
United Prod. Co.'s No. 6 Lambert, C. S. Hardwick Sur., Blk. 2, 2,466 ft. from N line, 596 ft. from E line.. Drlg. shale 1,300 ft.

CLAY CREEK—WASHINGTON COUNTY

M. O. N. T. Oil Co.'s No. 1 Giddings ..... Drlg. shale 3,225 ft.
Sun Oil Co.'s No. 3 Schermer, N. Clay Sur., 330 ft. NW, 330 ft. SW line of lease ..... Drlg. rock 1,640 ft.

SOUTH LOUISIANA

MISCELLANEOUS WILDCATS

ACADIA PARISH

Mills Bennett Prod. Co.'s No. 1 Riverside, 1,400 ft. S, 467 ft. E of NW cor. Sec. 61-9s-2w ..... Drlg. shale 4,601 ft.
Superior Oil Co.'s No. 1 P. O. Hermandez, 990 ft. W, 990 ft. S of NE cor. SE Sec. 34-8s-3e ..... Drlg. sand 5,595 ft.
I. M. Pharris' No. 1 Link Bros., 150 ft. S, 150 ft. E, NW cor. Sec. 36-7s-1e ..... Gumbo 475 ft.; standing.

CAMERON PARISH

Southern Sulphur Co.'s No. 1 Gulf of Mexico, 330 ft. S, 336 ft. E of SW cor. Sec. 29-15s-10w ..... T.D. 3,275 ft.; standing.
Texas Co.'s No. 9 State, Calcasieu Lake, 16,055 ft. W, 3,270 ft. N, NE cor. Sec. 1-14s-9w ..... Drlg. rock 5,346 ft.

CALCASIEU PARISH

Gulf Ref. Co.'s No. 1 Sweet Lake Oil Co., 660 ft. N, 330 ft. E of SW cor. Sec. 29-10s-5w ..... Drlg. shale 7,225 ft.
Fred Oil Co.'s No. 1 Farszt, 566 ft. N, 300 ft. W, SE cor. NW SE Sec. 26-8s-10w ..... Standing 1,230 ft.
Union Sulphur Co.'s No. 1 Barbe, 2,681 ft. W, 2,647 ft. S of NE cor. Sec. 1-9s-8w ..... T.D. 5,726 ft.

EVANGELINE PARISH

J. E. Ledau's No. 3 Vidrine, 30 ft. S of No. 2, Sec. 47-3s-2e ..... Standing 345 ft.

JEFFERSON DAVIS PARISH

Humble O. & R. Co.'s No. 2 Devilbiss, 1,350 ft. S, 250 ft. W of NE cor. Sec. 14-9s-4w ..... Drlg. sand 8,364 ft.
Shell Pet. Corp.'s No. 1 Kratzs, 660 ft. S, 330 ft. W of NE cor. NW Sec. 12-9s-4w ..... Drlg. shale 4,651 ft.

LAFOURCHE PARISH

Barnsdall Oil Co.'s No. 1 Harang, Lot 6, Twp. 17s-20e... Drlg. shale 7,000 ft.

IBERIA PARISH

Gross Tete Dev. Co.'s No. 1 Angellos ..... Standing 1,685 ft.
Y. D. Spell's No. 1 Bernard, 3,138 ft. from SW cor., along W boundary, thence northeasterly 1,140 ft. along N line Bernard tract and 52 ft. S of well in Sec. 54-12s-7e ..... Drlg. shale 2,998 ft.

PLAQUEMINES PARISH

Southern Sulphur Co.'s No. 1 Bay Adams ..... Derrick.

ST. BERNARD PARISH

Southern Sulphur Co.'s No. 1 Lake Lery, 400 ft. W, 500 ft. N, SW cor. Sec. 25-13s-15e ..... Cmtd. csg. 212 ft.
Southern Sulphur Co.'s No. 1 State Lake Bargne, 850 ft. N, 230 ft. E, SE cor. Sec. 33-13s-15e ..... Cmtd. csg. 650 ft.

ST. LANDRY PARISH

H. H. Hotchins Lbr. Co.'s No. 1 Whiteman Lbr. Co., 250 ft. out of SW cor. NE Sec. 15-5s-6e ..... Standing 1,505 ft.

ST. MARTIN PARISH

Standard Oil Co. of Kansas' No. 1 E. B. Hopkins, Sec. 33-10s-6e ..... Drlg. sand 7,010 ft.

LAKE PELTO—TERREBONNE PARISH

Whetstone O. & G. Co.'s No. 1 Buckley, 300 ft. S and E of NW cor. SW SW Sec. 35-19s-16e ..... Derrick.

TERREBONNE PARISH

Texas Co.'s No. 9 State-Dog Lake ..... T.D. 5,801 ft.; washing to bottom.
Texas Co.'s No. 10 State-Calliou Island..... Drlg. sand 3,849 ft.
Texas Co.'s No. 2 School Board-Bay St. Elaine ..... Drlg. shale 5,588 ft.
Texas Co.'s No. 2 State-Four Isle ..... Drlg. shale 4,865 ft.
Texas Co.'s No. 1 State Bay-St. Elaine, 3,900 ft. N, 2,300 ft. E of SW cor. Sec. 8-22s-18e ..... Moving in.
Texas Co.'s No. 10 State-Lake Pelto, 420 ft. N, 1,246 ft. E, SW cor. Sec. 4-23s-18e ..... Drlg. shale 4,307 ft.

VERMILLION PARISH

Hammill & Smith's No. 1 Faulk, 600 ft. S, 400 ft. E of NW cor. Sec. 5-12s-3e ..... Drlg. shale 5,409 ft.

VERNON PARISH

Vernon Oil Co.'s No. 1 Delta Land & Lbr. Co. ..... Shale 2,600 ft.; standing.
Robt. K. Williams, Jr.'s No. 1 Llano Del Rio, 1,185 ft. S, 1,000 ft. W of NE cor. Sec. 7-1n-9w ..... Derrick.

TEXAS

MISCELLANEOUS WILDCATS

AUSTIN COUNTY

Gem Oil Co. et al's No. 1 Klump, Steven F. Austin Sur., No. 4 League, 345 ft. from N cor. of S. D. Bostwick Sur., Abst. 18, in fork of Mill Creek ..... Moving in material.
Tibbetts et al's No. 1 Heideman, 4,320 ft. W along N line from NE cor. of A. Larson Sur. in J. Cooper Sur., thence 416 ft. N at R/A ..... Drlg. sand 1,413 ft.
R. E. Mitchell's No. 1 H. Schierda, J. F. Fitzgibbons Sur., 300 ft. out NE cor. 96-ac. tract ..... Moving in material.

BRAZORIA COUNTY

Danciger O. & R. Co.'s No. 1 L. Williams, 700 ft. NE line, 726 ft. SE line of 150-ac. tract, W. C. Carson Sur. ..... Coring 6,867 ft.
Shell Pet. Corp.'s No. 2 Harvey (Danbury), H.T.&B. R.R. Sur., 720 ft. SE of No. 1 Blakely-Winston ..... Drlg. shale 2,005 ft.

BRAZOS COUNTY

H. Elliott et al's No. 1 W. F. Odom, near center of 279-ac. tract in SW cor. of Isack Curil Sur. ..... Cmtd. surface csg.
Liner et al's No. 1 Peters, 300 ft. SE line, 300 ft. SW line of E. V. Peter fee, G. Powell Sur. ..... Derrick.
F. H. Scott's No. 1 Klintworth, I. Curd Sur., 300 ft. from N line, 400 ft. from E line ..... T.D. 1,487 ft.; gas sand 1,393-1,420 ft.; standing.

BURLESON COUNTY

Berry & Hays' No. 1 Young, 350 ft. from SW, 1,089 ft. from SE of 147-ac. tract, John Bird Sur. ..... Fishing 1,790 ft.
Poor Boy Oil Co.'s No. 2 Palinsky, A. G. Lawrence Sur., 300 ft. due S of No. 1 ..... Shale 1,025 ft.; standing.

CHAMBERS COUNTY

Smith & Lavender's No. 1 McCormick, F. Ludlow Sur., 150 ft. NE cor. ..... Derrick.

COLORADO COUNTY

Hughes-Patrick Oil Co.'s No. 1 Lake Side Irrigation, 1,500 ft. SE, 500 ft. NE NW cor. Patrick Reel Sur. .. Standing 6,006 ft.
Humble O. & R. Co.'s No. 1-A O. M. Powell, I.&G.N. Sur. No. 44, 150 ft. E of W line, 600 ft. N of S line of lease ..... Moving in material.
Plymouth Oil Co.'s No. 3 Ream, 1,000 ft. SW of No. 1. I.&G.N. Sur. ..... Cmtd. csg. 6,194 ft.; showing oil 6,194-97 ft.

FAYETTE COUNTY

Colorado Oil Corp., J. Winn Sur., 650 ft. NE of center of SW line of 63.8-ac. tract ..... T.D. 2,139 ft.; standing.

FORT BEND COUNTY

O'Connor Dome Oil Co.'s (was A. N. Phillips et al's) No. 1 Grigar, 2,150 varas E line, 1,550 varas N line, J. S. O'Connor Sur. ..... Drlg. 2,147 ft.
Quintana Oil Co.'s No. 1 Wood, O'Connell, Miller, S 87 deg. E. 13,000 ft. from SW cor. of lease ..... Drlg. shale 3,859 ft.
J. P. White's No. 1 Wing, B. Osborne Sur., 2,000 ft. from N, 4,000 ft. from E line of tract ..... Standing 705 ft.

GRIMES COUNTY

Clark & Dodd's No. 1 Murry, 150 ft. W line, 300 ft. S line, Anderson Sur. ..... Standing 715 ft.
Cambrian Oil Co.'s No. 1 W. V. Sangster, John Moore Sur., 300 ft. out of most westerly NW cor. of 218-ac. tract ..... Derrick.
Foster et al's No. 1 Quinn, 7,100 ft. from W line, 3,900 ft. from N line of S. F. Austin Sur. ..... Standing 2,928 ft.
Humble O. & R. Co.'s No. 1 Henderson, 750 ft. S, 700 ft. W at R/A of NE cor. of lease, G. W. Seaton Sur. ..... Drlg. sand and shale 5,162 ft.
H. C. Ratcliff's No. 1 Fulgham, A. Tuttle Sur., 600 ft. N line, 540 ft. W line of lease ..... Derrick.
O. C. Rush's No. 1 J. C. League, V. Sanders Sur., 165 ft. N, 455 ft. W of lease ..... Drlg. shale 2,016 ft.

HARRIS COUNTY

J. A. Hodges' No. 1 Scott, 200 ft. S, 900 ft. W of intersection of Crosby Huffman, F. Rankin Sur. ..... Drlg. shale 3,543 ft.
G. T. Lewis, tr.'s No. 1 Gore, S. McKissick Sur., 518 ft. SW along SE line of 100-ac. tract from W cor. of S. V. Allen's 105-ac. tract and 500 ft. NW at R/A in 100-ac. tract (W.O.) ..... T.D. 6,079 ft.; standing.
Melba Oil Co.'s No. 1 House, Harris County School Sur., 162 ft. S, 600 ft. N of NE cor. Sec. 32 ..... Standing 1,110 ft.
Russell et al's No. 1 Burt & Griffith, S. Keely Sur., 200 ft. N line, 200 ft. E of highway ..... T.D. 2,156 ft.; standing.
Jack Schultz et al's No. 1 Synd. Land Co., 2,200 ft. N of S line, 200 ft. W from SE cor. Pruitt Sur. ... T.D. 5,416 ft.; standing.
Turnbull & Irwin's No. 1 Dunn, Enoch Brinson Sur., 1,550 ft. N line, 1,200 ft. W of NW cor. of Johnson Hunter Sur. ..... Drlg. shale 900 ft.
E. E. Young et al's No. 1 Paddock, J. Cunningham Sur., 300 ft. W of E line of Blk. 41 on line dividing Blks. 46 and 47 ..... Standing 1,800 ft.

HOUSTON COUNTY

Thompson et al's No. 1 E. W. Harrison, 330 ft. out E cor. 130-ac. tract, J. Mastera, Sr., Sur. ..... Drlg. shale 5,576 ft.
Murmac Oil Co.'s No. 1 G. L. Murray & Son, John Durst Sur. ..... Standing 3,186 ft.

JACKSON COUNTY

Ed Parsons et al's No. 1 Clark, 300 ft. out SW cor. of R. J. and M. Clark lease, A. S. White Sur. ..... Drlg. shale 5,375 ft.

JEFFERSON COUNTY

Lucky Strike Oil Co.'s No. 1 Walker, D. Easley Sur., 2,100 ft. N, 1,400 ft. E of NW cor. of Lot No. 13.. Drlg. gumbo 1,423 ft.
Sun Oil Co.'s No. 1 H. Long, 1,500 ft. N line, 990 ft. E line of lease ..... Drlg. shale 2,155 ft.

LIBERTY COUNTY

Layton et al's No. 1 J. A. Lovett, 200 ft. W of E line, 600 ft. N of S line of lease, P. P. Devers Sur. ..... Cmtd. csg. 785 ft.
Miramar Oil Corp.'s No. 1 Crowe & Jacobs, H.&T.C. Sur. 21, 950 ft. W of E line, 110 ft. N of S line of 300-ac. tract ..... Derrick.
E. V. Parsons et al's No. 1 Foster Lbr. Co., Ann Holhausen Sur., 750 varas S line, 3,700 varas W of E line ..... Rigging.
J. Seale, tr.'s No. 1 Finley, A. B. Harden Sur., 700 ft. from W line, 400 ft. from N line of 60-ac. tract..... Derrick.
Thomas et al's No. 1 A. Ercke, 600 ft. E of W line, 2,350 ft. N of S line, A. H. Ercke Sur. in Reason & Green Sur. ..... Drlg. shale 4,952 ft.

MADISON COUNTY

Golden Tr., et al's No. 1 Poteet, J. S. Hunter Sur., 350 ft. from N line and 150 ft. from W line of tract .... Standing 1,951 ft.

MATAGORDA COUNTY

H. E. Clark et al's No. 1 Turner, M. Cummings Sur., 4,900 ft. NE line and 3,800 ft. SE line ..... Drlg. shale 4,375 ft.
Continental Oil Co.'s No. 1 Boker, 400 ft. out of SW cor. Lot 17, Robbins & Middle Subd., J. W. Criswell Sur. ..... T.D. 6,504 ft.; washing to bottom 3,000 ft.
Oils Consd., Inc.'s No. 1 Hawkins, Daniel McCarthy Sur., 1,240 ft. NE, 350 ft. NW of S cor. ..... T.D. 5,510 ft.; drlg. new hole at 4,875 ft.
Skelly Oil Co.'s No. 1 Cobb, M. Cummins Sur., 434 ft. from E, 1,506 ft. S of F. G. Cobb's 167-ac. tract ... Drlg. 2,000 ft.
United North & South Dev. Co.'s No. 1 Unit 6 (No. 2 Stoddard), 25 ft. each way out of NW cor. of Lot 19, Buckeye townsite ..... Drlg. sticky shale 8,296 ft.
United North & South Dev. Co.'s No. 1 Unit 25, 1,335 ft. S, 1,000 ft. E of No. 1 Unit 6 ..... Coring 8,335 ft.

MONTGOMERY COUNTY

Baker et al's No. 1 Benker, D. James Sur. ..... Reaming 4,920 ft.
Derring & Frazier's No. 1 Rolph, H. Blood Sur., 660 ft. from center of survey ..... Abd. 5,655 ft.
Steen Drlg. Co.'s No. 1 Long Bell Lbr. Co., 440 ft. S and E from NW cor. of Wilson Barker Sur. ..... Moving in material.
Sutton & Hawkins' No. 2 Foster est., 90 ft. E of No. 1, A. M. Del Garza Sur. ..... Drlg. shale 2,775 ft.

NACOGDOCHES COUNTY

James W. Rich's No. 1 Unknown, J. L. Ewing Sur., 2,777 ft. from W line, 5,208 ft. from S line of survey.. Drlg. shale 1,357 ft.

ORANGE COUNTY

Blue Line Oil Co.'s No. 1 Godwin, Richard Ballew Sur., 300 ft. from E line, 150 ft. from NE cor. of Godwin 20-ac. tract ..... Standing 465 ft.
Texas Louisiana Oil Co.'s No. 1 Starks, 2,450 ft. N of NW cor. M. Delano Sur. 68, 10,500 ft. E at R/A... T.D. 1,197 ft.; standing.

POLK COUNTY

D. B. McCall's No. 1 Faulkner, 350 ft. W of center of E line of 200-ac. tract, G. B. Dikes Sur. ..... Drlg. shale 1,154 ft.

REFUGIO COUNTY

C. B. Bunte et al's No. 1 F. B. Rooke, J. M. Aldritte Sur., CWL of Sec. 4 ..... Abd. 6,505 ft.
Humble O. & R. Co.'s No. 11 O'Connor, Powers & Hewitson Sur., 301 ft. S, 833 ft. E of No. 10 ..... Rigging.
Holland Oil Co.'s No. 1 Peck, 366 ft. N and W from SW cor. Sec. 24, Bonnie View Subd. ..... Drlg. shale 2,358 ft.

SAN JACINTO COUNTY

Piedmont Oil Co.'s No. 2 Foster Lbr. Co., 330 ft. each way out of NE cor., Geo. Taylor Sur. ..... Moving in material.

TRINITY COUNTY

T. M. Smith et al's No. 1 C. Moody, E. Roberts Sur., 552 ft. W of E line, 1,202 ft. N of S line, of 40-ac. tract ..... Drlg. shale 2,373 ft.

TYLER COUNTY

Turnbull & Irwin's No. 1 Kirby Lbr. Co., J. J. Pemberton Sur., 1,238 ft. E from SW cor. of Ledrick Lbr. Co.'s 381-ac. tract, thence S 250 ft. at R/A ... Drlg. shale 536 ft.

VICTORIA COUNTY

J. F. Camp's No. 2 Maurer, 3,300 ft. SW of No. 1 ..... Derrick.
Stoneleigh O. & G. Co.'s No. 1 Dietzel, 330 ft. out of NW cor. of Dietzel's 95-ac. tract, R. Manchola Sur. T.D. 4,542 ft.; reaming.
Stoneleigh O. & G. Co.'s No. 2 E. B. Terrell, 330 ft. out of SE cor. of Terrell's 215-ac. tract, R. Manchola Sur. ..... Moving in derrick.
Stoneleigh O. & G. Co.'s No. 1 Trybble, 330 ft. out of SE cor. Trybble's 122-ac. tract, R. Manchola Sur. .. Moving in derrick.
Texas Co.'s No. 7-A McFaddin, 250 ft. due N of No. 7, A. J. Gray Sur. ..... T.D. 1,599 ft.; pumping mud
Texas Co.'s No. 8 McFaddin, A. J. Gray Sur., 6,600 ft. N of S line, 1,383 ft. from E line of NE cor. ..... Drlg. sand 3,185 ft.

WALKER COUNTY

McDowell et al's No. 1 Thompson, Jackson Crouch Sur., 330 ft. E of W line, 1,020 ft. S of N line.... Derrick.

WHARTON COUNTY

Harvey & Rusk's No. 1 Reid, 1,000 ft. SW, 500 ft. SE from N cor. of lease, Francis Biggam Sur. ..... Drlg. shale 6,135 ft.
Monarch Oil Co.'s No. 1 Schateck, 150 ft. each way out of SW cor. G. W. Reynolds Sur. ..... Standing 1,475 ft.
Nabert et al's No. 1 Lurker, 210 ft. out of SE cor. of N½ SW Sec. 58, E.T.R.R. Sur. ..... T.D. 5,026 ft.; pulled in derrick.
Pure Oil Co.'s No. 1 W. Garrett, Sec. 28, 4,456 ft. SE, 1,690 ft. NE of W cor. ..... T.D. 6,343 ft.; standing.
Pure Oil Co.'s No. 1 A. J. Wilder, T. W. Hurd Sur., 509, 2,575 ft. SE, 1,690 ft. NE from W cor. Sec. 28.. T.D. 7,614 ft.; reaming.
Pure Oil Co.'s No. 1 W. H. Lancaster, Morris & Cummings Sur., Sec. 23, 1,650 ft. NW, 1,600 ft. SW of E cor. of section ..... Fishing drill stem 7,142 ft.

Pure Oil Co.'s No. 1 Willis McIntyre, 1,650 ft. S of N line, 1,759 ft. S of E line of section .. .. Fishing screen 6,447 ft.
Pure Oil Co.'s No. 1 Wallace Houston, 858 ft. SE of NW line, 1,690 ft. NE of SW line, Sec. 28, (T. W. Heard Sur.) ..... Sand 6,441-51 ft.; drlg. cmt. plug.
Pure Oil Co.'s No. 1 Isaac Weaver, J. M. Brownson Sur., Sec. 22, 1,850 ft. out of N cor. of section ..... T.D. 6,181 ft.; standing.
Smith, McDannald and Pure Oil Co.'s No. 1 B. M. Yeamans, 330 ft. out of N cor. of B. M. Yeamans Sur., Abst. 913 ..... Tested S.W. at 6,196 ft.; standing

Gulf Coast Proven Areas

SOUTH LOUISIANA FIELDS

BLACK BAYOU—CAMERON PARISH

Shell Pet. Corp.'s No. 17 Watkins, 660 ft. E of No. 15, in Sec. 18-12s-12w ..... Drlg. sand 4,142 ft.

CAMERON MEADOWS—CAMERON PARISH

Humble O. & R. Co.'s No. 4 Cameron Meadows, 360 ft. N, 400 ft. W, SE cor. Sec. 21-14s-13w ..... Drlg. shale 6,417 ft.
Humble O. & R. Co.'s No. 5 Cameron Meadows, 2,260 ft. W, 28 ft. S of NE cor. Sec. 21-14s-14w..... Driving piling.
Burton-Sutton Oil Co.'s No. 2 School Land, 1,866 ft. W, 150 ft. N of SE cor. Sec. 16-14s-13w ..... Drlg. shale 3,545 ft.

CHOCTAW—IBERVILLE PARISH

Standard Oil Co. of La.'s No. 5 Myrtle Grove, 1,700 ft. N, 200 ft. W, SE SW cor. SW Sec. 52-9s-11e..... Drlg. sand 4,129 ft.; S.O.

EDGERLY—CALCASIEU PARISH

S. A. Emerson's No. 13 Hunter, 465 ft. N, 90 ft. E, SW cor. Sec. 21-9s-11w (W.O.) ..... Standing 4,118 ft.
Union Sulphur Co.'s No. 1 Hunter, 210 ft. E, 1,260 ft. N of SW cor. SE Sec. 21-9s-11w ..... Drlg. sand 4,395 ft.; S.O.
Yount Lee Oil Co.'s No. 1 Sulphur Mining Co., 150 ft. S, 300 ft. W, NE cor. Sec. 33-9s-11w ..... Drlg. sand 6,452 ft.

GARDEN ISLAND—PLAQUEMINES PARISH

Texas Co.'s No. 10 Garden Island ..... Drlg. lime 1,713 ft.

GUEYDAN—VERMILLION PARISH

Pure Oil Co.'s No. 6 Alliance Trust, 667 ft. E, 1,787 ft. S line of lease, Sec. 34-11s-1w..... Drlg. clay 85 ft.
Pure Oil Co.'s No. 5 Mulvey, 500 ft. from No. 2 Mulvey, in line with Nos. 1 and 2 ..... Drlg. shale 4,662 ft.

HACKBERRY—CAMERON PARISH

Wilford Lahay et al's No. 1 Roux (W.O.) ..... Drlg. shale 3,828 ft.
Red Kelly Oil Co.'s No. 1 Duhon, 200 ft. S, 500 ft. E, NW cor. Sec. 27-12s-10w ..... Rigging.
Texas Co.'s No. 11-B State ..... Spudding.
Union Sulphur Co.'s No. 1 Barber est., 1,720 ft. N line, 320 ft. E of SW cor. Sec. 12-12s-10w..... Drlg. shale 7,246 ft.

IOWA—CALCASIEU AND JEFF DAVIS PARISHES

Barnsdall Oil Co.'s No. 3 Fontenat, 1,627 ft. S, 330 ft. W from SW cor. Sec. 7-9s-6w..... Drlg. shale 6,952 ft.
Magnolia Pet. Co.'s No. 1 Le Blew, 670 ft. W, 330 ft. S of NE cor. SE Sec. 14-9s-7w ..... Drlg. sand 7,272 ft.
Magnolia Pet. Co.'s No. 5 Waite, 660 ft. E, 300 ft. N, SW cor. SE Sec. 12-9s-7w ..... Drlg. sand 6,702 ft.
Shell Pet. Corp.'s No. 1 Arcoln, 330 ft. out of NW cor. 80-ac. tract, Sec. 7-9s-6w ..... Drlg. shale 4,410 ft.
Shell Pet. Corp.'s No. 1 Tuten, 265 ft. S, 330 ft. W of NE cor. SW Sec. 13-9s-7w ..... T.D. 6,636 ft.; setting tubing to pump.
Shell Pet. Corp.'s No. 1 Johnson, 265 ft. S, 330 ft. E of NW cor. SW Sec. 18-9s-6w ..... Drlg. shale 6,729 ft.
Shell Pet. Corp.'s No. 1 C. Le Blew, 660 ft. W, 330 ft. N of SE cor. of lease ..... Drlg. shale 6,147 ft.

JENNINGS—ACADIA PARISH

Yount Lee Oil Co.'s No. 13 Houssiere-Latrielle, Sec. 47-9s-2w, 300 ft E of No. 12 ..... Drlg. shale 6,925 ft.

LAKE BARRE—TERREBONNE PARISH

Texas Co.'s No. 10 L.L.&E., 4,543 ft. S, 503 ft. W of NW cor. Sec. 30-21s-20 ..... **Derrick.**
Texas Co.'s No. 22 State-Lake Barre, 150 ft. northerly from No. 13 ..... Drlg. sand 5,664 ft.
Texas Co.'s No. 20 State-Lake Barre, 392 ft. northerly from No. 22, Sec. 30-21s-20e ..... Derrick.
Texas Co.'s No. 25 State-Lake Barre ..... Drlg. shale 3,906 ft.
Texas Co.'s No. 26 State-Lake Barre, 150 ft. northerly from No. 22 ..... Derrick

LAKE WASHINGTON—PLAQUEMINES PARISH

Humble O. & R. Co.'s No. 3 La. State, Twp. 20s-26e, 2,920 ft. N, 19 ft. E of station ..... Drlg. shale 3,896 ft.

LEESVILLE—LAFOURCHE PARISH

Gulf Ref. Co.'s No. 1 Community, Blk. C, 151 ft. N of S line, 100 ft. E of E bank of Bayou La Fourche, Sec. 23-21s-22e ..... Drlg. sand 5,176 ft.
Gulf Ref. Co.'s No. 1 Community, Blk. E, 151 ft. N of S line, 150 ft. E of E bank of Bayou La Fourche, Sec. 23-21s-22e ..... Derrick.
Gulf Ref. Co.'s No. 1 Le Fort, 100 ft. N of S line, 100 ft. W of N bank of Bayou La Fourche, Sec. 23-21s-22e ..... Drlg. shale 5,419 ft.
Hellis et al's No. 1 State-Bayou Lafourche, 315 ft. N along W side of bayou at R/A, 96 ft. E at R/A from SE cor. Lot 3, Sec. 26-21s-22 ..... Drlg. gumbo 1,150 ft.
Texas Co.'s No. 8 L.L.&E., 2,321 ft. due S, 450 ft. W from NE cor. Sec. 27-21s-22e ..... Drlg. sand 3,648 ft.
Texas Co.'s No. 10 L.L.&E., 3,500 ft. due S, 375 ft. due W of NE cor. Sec. 27-21s-22e ..... Drlg. shale 2,753 ft.
R. Y. Walker's No. 1 State-Bayou Lafourche, 930 ft. N along W line of Lot 6 from SW cor. section, thence 430 ft. at R/A, Sec. 26-21s-22 ..... Moving in material.

LOCKPORT—CALCASIEU PARISH

Magnolia Pet. Co.'s No. 7 Farquaher, 330 ft. S, 174 ft. W of NE cor. SW NE Sec. 8-10s-9w ..... **Derrick.**
Magnolia Pet. Co.'s No. 11 Bordages, 660 ft. N, 490 ft. W of SE cor. NE NE Sec. 8-10s-9w ..... Drlg. shale 5,752 ft.
Magnolia Pet. Co.'s No. 4-A Watkins fee, 685 ft. E, 200 ft. N of SW cor. NW NE Sec. 9-10s-9w..... Drlg. shale 6,710 ft.
Union Sulphur Co.'s No. 1 Farquaher, 200 ft. S and W lines, NE cor. SW SE Sec. 36-12s-10w, 2-ac. tract ....Drlg. gumbo 5,893 ft.

PORT BARRE—ST. LANDRY PARISH

Gulf Ref. Co.'s No. 5 Wilson-Cockran, 600 ft. N, 910 ft. E of No. 2, Sec. 4-6s-5e ..... Drlg. gumbo 3,387 ft.
Texas Co.'s No. 17 Botney Bay, 1,800 ft. S 3 deg. W, 600 ft. N 82 deg. most southern NE 560 deg. tract, Sec. 4-6s-5e ..... Derrick.
Texas Co.'s No. 18 Botney Bay ..... Comp. 754 bbls.; ½-in. choke, 3,492 ft.
Texas Co.'s No. 19 Botney Bay ..... Derrick.
Texas Co.'s No. 1 Perkins, 2,501 ft. S, 1,003 ft. E of NW cor. Sec. 21-6s-5e ..... Drlg. gumbo 2,425 ft.

SORRENTO—ASCENSION PARISH

Union Sulphur Co.'s No. 2 Lacy White Frank, 1,175 ft. N, 1,615 ft. W of SE cor. Sec. 16-10s-4e ..... Standing 4,593 ft.
Union Sulphur Co.'s No. 25 United Land ..... Drlg. shale 4,916 ft.

STARKS—CALCASIEU PARISH

Union Sulphur Co.'s No. 4 Industrial Lbr. Co., 2,254 ft. from W, 2,116 ft. from S line, NE cor. Sec. 30-9s12w. Drlg. shale 2,978 ft.

SULPHUR—CALCASIEU PARISH

Union Sulphur Co.'s No. 787 fee, 119 ft. from N line, 1,632 ft. from W line of C Sec. 29-9s-10w..... Drlg. shale 4,210 ft.
Union Sulphur Co.'s No. 788 fee, 602 ft. S, 1,209 ft. W. of C Sec. 29-9s-10w ..... Drlg. rock 4,050 ft.
Union Sulphur Co.'s No. 789 fee, 1,653 ft. N, 795 ft. E, C. Sec. 29-9s-10w ..... Drlg. shale 2,349 ft.
Union Sulphur Co.'s No. 790 fee, 929 ft. S and 802 ft. W of center of Sec. 29-9s-10w ..... Rigging.
Union Sulphur Co.'s No. 744 fee, 2 ft. S and 34 ft. W, C Sec. 29-9s-10w (O.W.) ..... Milling out at 3,202 ft.
Union Sulphur Co.'s No. 791 fee, 529 ft. N, 907 ft. E of SW cor. Sec. 33-10s-12w ..... Derrick.

SWEET LAKE—CAMERON PARISH

Pure Oil Co.'s No. 12 Yount Lee fee, 800 ft. S of No. 11, in line with Nos. 9 and 11, Sec. 13-13-3w..... Spudding.

VINTON—CALCASIEU PARISH

Marrs McLean's No. 16 Gray, 426 ft. N, 658 ft. E of SW cor. Sec. 33-10s-12w ..... T.D. 891 ft.; cmtd. csg.
Starks & Broker's No. 11 A. J. Vincent, NW cor. SE Sec. 33-10s-12w ..... Moving in material.
Wilson Broach's No. 10 Wilson Strip, 650 ft. N, 379 ft. E, SW cor. SE NE Sec. 33-10s-12w..... Derrick.
Wilson Broach Co.'s No. 12 Wilson Strip, 250 ft. N, 643 ft. E of SW cor. SE NE Sec. 33-10s-12w..... Drlg. shale 3,288 ft.
Wilson Broach Co.'s No. 13 Wilson strip, 50 ft. N and 907 ft. E of SW cor. of Sec. 33-10s-12w ..... Derrick.
Gulf Ref. Co.'s No. 71 Gardner, 352 ft. W, 50 ft. S of NE cor. NE SE Sec. 33-10s-12w ..... Drlg. sand 2,970 ft.
Union Sulphur Co.'s No. 1 Vincent ..... Drlg. shale 5,093 ft.
Vinton Pet. Co.'s No. 59 Gray (W.O.) ..... Comp. 35 bbls. pumping, 2,493 ft.
L. N. York's No. 1 Mayo (W.O.) ..... Comp. 20 bbls. pumping, 3,188 ft.

Wildcat Operations in Southwest Texas

(Continued from Page 50)

Whitting's No. 1 Duval County Ranch Co., 1,511 ft. from S line, 2,143 ft. from W line of Blk. 21, of Sur. No. 196 ..... T.D. 2,266 ft.; abd.
P. H. Wilson's No. 1 Sue Withers, 330 ft. from N and W lines of Sur. No. 334 ..... T.D. 1,508 ft.; abd.

EDWARDS COUNTY

Love and Evans' No. 1 Steve Brown, 660 ft. from N and E lines of Sec. 66, G.W.T.&P.R.R. Sur., 15 miles W of Rock Springs ..... T.D. 3,002 ft.; at contract depth; waiting on heavier rig.

FRIO COUNTY

Amerada Pet. Corp.'s No. 1 Frank Doering, 34 ft. from W line, 1,700 ft. from S line of Tract No. 7 in Marcia Louisa Carranza Sur. No. 302 ..... T.D. 6,064 ft.; set 7-in. pipe at 6,057 ft.

GONZALES COUNTY

Volz & Shelling's No. 1 Bennett Botts et al, 150 ft. from W line, 800 ft. from N line of 420-ac. tract, lease in Gonzales Sur. ..... T.D. 825 ft.; abd.

GUADALUPE COUNTY

A. F. Barnhill's No. 3 F. A. Phullman, 1,300 ft. from N line, 152 ft. from E line of lease in L. Bollinger Sur. ..... Rigging up.

HIDALGO COUNTY

Chancellor & Hall's No. 1 Garcia, 150 ft. from W line of Porcion No. 42, and 150 ft. N of old Military Highway ..... T.D. 3,187 ft.; drilled plugs.
Daskom Bros.' No. 1 fee, center of Porcion No. 45, and ½ mile S of Highway No. 4 ..... T.D. 4,285 ft.; drlg.

JIM HOGG COUNTY

Jay E. Jones' No. 1 Lum Saunders, center of Blk. 41, Sec. 9, Holbien Subd. of Las Animas grant ..... T.D. 1,050 ft.; drlg.
Navarro Oil Co.'s No. 1 Trevino, 330 ft. from N line, 400 ft. from E line of 1,500-ac. tract in I.&G.N. R.R. Sur. ..... T.D. 3,060 ft.; abd.

JIM WELLS COUNTY

Plymouth Oil Co.'s No. 1 Cuero Cattle Co., 330 ft. from S and W lines of H.T.&B. Sur. No. 7, 2½ miles W from Alfred ..... **Rigging up.**
Trinity Drillers' No. 1 Seeligson, 330 ft. from N and E lines of Sec. 71, of R. P. Haldeman Subd., and in S.K.&K. Sur. No. 215 ..... T.D. 4,032 ft.; P.B. to 2,365 ft. and set csg.

KARNES COUNTY

Campbell et al's No. 1 Ira Coats, 330 ft. from S and E lines of 260-ac. tract in Carlos Martinez Sur. .... **Derrick.**
C. J. Webster's No. 1 J. B. Cannon, 1,140 ft. from N line, 250 ft. from E line of 80-ac. tract in Lambrano Sur. ..... T.D. 1,790 ft.; drlg.

KENDALL COUNTY

A. P. Pierce's No. 1 Werner, in SW cor. of 40-ac. tract, 150 ft. from S and W lines, in J. F. Torrey Sur. .... T.D. 992 ft.; S.D.
W. E. Waldrip's No. 1 Charles Meckel, 300 ft. from E line, 8,300 ft. from S line of Thos. J. Sweeney Sur. No. 10 ..... T.D. 415 ft.; waiting for csg.

KERR COUNTY

J. E. Anderson's No. 1 J. D. Witt, 1,320 ft. from N line, 1,220 ft. from W line of Sec. 1,923, in Hamilton Sur., 4 miles S of Center Point ..... T.D. 1,885 ft.; standing in shale and sand.
Van Duyn & Moore's No. 1 Nowlin, 2,000 ft. from E line, 2,200 ft. from N line of Jas. R. Bettner Sur. No. 99 ..... T.D. 1,040 ft.; standing.

LA SALLE COUNTY

W. H. Wallace's No. 1 H. C. Yeager, 150 ft. from S and E lines of Sur. No. 95 ..... T.D. 2,280 ft.; standing.

LIVE OAK COUNTY

H. Coquat et al's No. 1 Burgess, 990 ft. from W line of Sec. 77, 33 ft. from N line of Simmons Subd. in farm tract No. 3,487 ..... T.D. 1,500 ft.; coring.
Loma Oil Co.'s No. 1 Reiffert, 300 ft. from NW line, 1,100 ft. from SW line of 130-ac. tract, in Stephen Hays Sur. ..... Rigging up.
Stuart Mossman's No. 1 W. J. Armstrong, 2,970 ft. from S line, 330 ft. from W line of 269-ac. tract in Henry Sur. ..... Spudded in.
Ike Taylor's No. 1 Griffith, 350 ft. from SE line, 1,500 ft. from SW line of J. D. Osburn Sur. ..... T.D. 950 ft.; abd.

McMULLEN COUNTY

Armoil Prod. Co.'s No. 1 Kate Martin, 1,470 ft. from SE line, 1,470 ft. from SW line of H.T.&B. Sur. No. 9 ..... T.D. 1,480 ft.; drlg.
Lefevre & Spice's No. 1 Hagist, 330 ft. from N and E. lines of S 200 acres of Sec. 17, of H.&T.C.R.R. Sur... T.D. 100 ft.; drlg.
Pitkin-Goldston Oil Co.'s No. 1 Hagist, 330 ft. from N line, 900 ft. from E line of G. B. McKinney Sur. No. 467 ..... T.D. 2,370 ft.; abd.
Smith & Mowinkle's No. 1 C. L. Wulf, 1,517 ft. from S line, 188 ft. from W line of E½ Sec. 12 of Wentz Subd. ..... T.D. 1,629 ft.; drlg.
Two Rivers Oil Co.'s No. 2 Two Rivers Ranch, 330 ft. from W line, 100 ft. from N line of Sec. 64, of Two Rivers Ranch Subd. ..... T.D. 317 ft.; standing; first reported as No. 2 Wulf.

MEDINA COUNTY

O. R. Framme's No. 1 E. Boelke, 987 ft. from N line, 600 ft. from E line of 102-ac. tract in S. Huth Sur. No. 10 ..... T.D. 650 ft.; drlg. shale.

MILAM COUNTY

O. H. Birdwell's No. 1 J. R. Bartek, 150 ft. from N line, 180 ft. from W line of 88-ac. tract in J. A. de Pena Sur. ..... Rigged up.
B. F. Robinson's No. 1 W. M. Caffey, 150 ft. N and E, of SE cor. of B. P. Duncan Sur. in SW cor. of 50-ac. Caffey tract in J. Bright Sur. ..... T.D. 1,965 ft.; laying wtr. line.

NUECES COUNTY

A. C. Erwin's No. 1 Sagarin, 520 ft. from N. 160 ft. from E line of 35-ac. tract in Sec. 4, H. L. Kenney Sur. ..... T.D. 4,900 ft.; abd.
Texon Royalty Co.'s No. 1 McCoy, 330 ft. from W line, 3,830 ft. from S line, in Sec. 3 of Palo Alto Sur. ... T.D. 5,500 ft.; fishing for 59 fourbles of drill pipe lost while testing sand at 5,488-95 ft.

SAN PATRICIO COUNTY

Heep Oil Corp.'s No. 1 R. H. Welder, center of J. M. Portilla Sur. ..... T.D. 3,800 ft.; drlg.

STARR COUNTY

Accumulative Royalty Co.'s No. 1, Martinez, 800 ft. from S line, 500 ft. from W line of C.C.S.D.&R. G.N.G. Sur. No. 217 ..... T.D. 2,865 ft.; S.D.

B. & B. Oil Co.'s No. 2 Kelsey Bass, 330 ft. from W and S lines of Blk. 12 of Subd. of Porcions 86 and 87, jurisdiction Camargo ..... Rigging up.

Danvers & Harrison's No. 1 C. Ramos, 2,310 ft. from SE line, 330 ft. from SW line of Sur. No. 150 ..... Rigging up.

Goodwin & Yantis' No. 4 Kelsey Bass, 330 ft. from N and E lines, Sec. 4, of subd. of Porcions 86 and 87.. T.D. 690 ft.; cored sand; set csg.

Goodwin & Yantis' No. 3 Kelsey Bass, 150 ft. from S and E lines of Blk. 8, Coast O. & G. Subd. of Secs. 2 and 3, Porcions 86-87 ..... T.D. 1,040 ft.; standing.

Great Plains Oil Co.'s No. 1 Sanchez, 660 ft. from W line, 330 ft. from S line of SE NW of Sur. No. 344.. T.D. 3,865 ft.; making heads.

Myers, Sullivan & Jenkins' No. 1 Starr County Cattle Co., 330 ft. from N line, 330 ft. from W line, Blk. 62, Porcion 89, Share 60 ..... T.D. 2,520 ft.; standing.

R. D. Perkins & Hoffman's No. 1 E. A. Peffler, 3,090 ft. from W line, 2,480 ft. from S line of Sur. 933.. T.D. 365 ft.; standing.

TRAVIS COUNTY

Franklin et al's No. 1-A Reimers, 1,200 ft. from SE line, 1,600 ft. from most southerly SW line of Sur. No. 35 ..... T.D. 925 ft.; drlg.

Marts & Beavens' No. 1 Mrs. A. Bengston, 150 ft. from SE line, 2,200 ft. from NE line fo Thos. Smith Sur.. T.D. 686 ft.; drlg. hard dry Serpentine.

Weaver & Osborn's No. 1 Will Reinhardt, 300 ft. from NW line, 1,300 ft. from NE line of Will Reinhardt 100-ac. tract in William Lewis, Jr., Sur. 2 ..... T.D. 248 ft.; standing.

UVALDE COUNTY

Frank A. Brown's No. 1 Milliken, 1,800 varas from W line which is Sabinal River, and 108 varas from S line of Antonio Cruz Sur. No. 383 ..... T.D. 585 ft.; drlg.

WEBB COUNTY

Frank Garvis' No. 1 Yeager-Stroman, 200 ft. from S line, 450 ft. from E line of Share 5 in Los Animas grant ..... T.D. 2,198 ft.; standing.

L. E. Lockhart's No. 1 E. Eikel, 330 ft. from N line, 260 ft. from E line of Sur. No. 1,672 ..... Rigging up.

Weekly Oil Co.'s No. 1 Laurel Bros., 330 ft. from N and W lines of SW of Sur. No. 1,103 ..... T.D. 1,400 ft.; drlg.

WILSON COUNTY

Humble O. & R. Co.'s No. 1 Houston, 900 ft. from SE line, 450 ft. from SW line of tract in Joseph Reynolc's Sur. ..... T.D. 4,933 ft.; standing.

WILLIAMSON COUNTY

McLean et al's No. 2 R. C. Miller, 800 ft. to S line, 100 ft. to W line of tract, B. Manlove Sur. ..... T.D. 2,300 ft.; standing.

Pederson's No. 1 Forwood, 900 ft. from N and 1,200 ft. from E line of 160-ac. tract in Fisher Sur. ..... T.D. 950 ft.; abd.

R. S. Wilson's No. 2 Sing, 300 ft. from SW line, 1,250 ft. from SE line, of T. A. Moore Sur. ..... T.D. 350 ft.; drlg. shale.

ZAPATA COUNTY

F. G. Delaney's No. 1 Leonard Haines estate, 330 ft. from SE line, 2,970 ft. from SW line of Villa Grant Sur. ..... T.D. 2,190 ft.; drlg.

J. P. Doyle's No. 1 I. Ramires, 150 ft. from NW and SW lines of Blk. 15, Share 1, Porcion 19 ..... T.D. 40 ft.; spudded in; S.D.

Muckelroy's No. 1 Flores, on NE line and 75 ft. from SE line of Lot 2, Blk. 30, Muckelroy Subd. of Porcion No. 37 ..... Derrick.

Southwest Texas Proven Areas

Week Ending January 6

CEDAR CREEK POOL—BASTROP COUNTY

Cole Pet. Co.'s No. 3 American Natl. Bank, 350 ft. W of No. 1 in R. Gage Sur. ..... Rigging up.

HILBIG POOL—BASTROP COUNTY

Humble O. & R. Co.'s No. 2 F. O. Beck, 45 acres, 430 ft. from NE line of survey and tract, 750 ft. from SE line of tract, or 1,000 ft. SE of No. 1 in Andrew Mays Sur. ..... Rigging up.

NORTH DALE POOL—BASTROP COUNTY

Ogden & Reed's No. 1 C. L. Riddle, 150 ft. from NW line, 2,750 ft. from SW line of Maxmillian Sur. .... T.D. 2,305 ft.; swbd. a little oil; treating with acid.

TULETA POOL—BEE COUNTY

Garland Clymore's No. 1 Rapp & Hatch, 550 ft. E along the S line from R.R., thence 1,350 ft. N at R/A in Sec. 12 of J. M. Uranga Sur. ..... Moving in rig.

ECKERT POOL—BEXAR COUNTY

Alamo Nat. Gas Co.'s No. 2 Coreth, 300 ft. SE of Humble's No. 2 Coreth in A. Stafford Sur. ..... T.D. 995 ft.; S.D.

F. H. Eckert & Son's No. 8 Louis Brehm, 550 ft. from W line, 150 ft. from S line of 93-ac. tract in P. L. Buguor Sur. ..... Drlg.

Gatlin Oil Co.'s No. 18 Beck, 545 ft. from E line, 1,051 ft. from S line of 279-ac. tract in Juan Montez Sur. ..... T.D. 697 ft.; set csg.

J. F. Harrison's No. 1 F. Gembler, 150 ft. from NW line, 460 ft. from NE line of 88-ac. tract in J. Montes Sur. ..... T.D. 831 ft.; S.D.

S. J. Moore's No. 2 T. W. Masterson, 150 ft. from S line, 175 ft. from W line of 41-ac. tract in Miguel Gortaris Sur. ..... T.D. 575 ft.; drlg.

Roseta Oil Co.'s No. 12 Halbardier, 3,620 ft. from E line, 1,150 ft. from N line of Jose M. F. Perez Sur. . T.D. 716 ft.; comp. 6 bbls. daily.

Swearingen Oil Co.'s No. 16 Halbardier, 150 ft. from N line of tract, 2,625 ft. E of NW cor. of survey in Jose M. F. Perez Sur. No. 57 ..... T.D. 670 ft.; comp. 6 bbls. dly.

Trio Oil Corp.'s No. 6 Sandemer, 800 ft. from E line, 150 ft. from S line of 109-ac. tract in Anton Manchaca Sur. No. 51 ..... T.D. 638 ft.; comp. 6 bbls. dly.

VON ORMY POOL—BEXAR COUNTY

Von Ormy Oil Co.'s No. 2 E. B. Carruth, 515 ft. from W line, 1,970 ft. from S line of 160-ac. tract out of 657-ac. tract in F. Rolen Sur. ..... Rigged up and standing.

WEBSTER POOL—CALDWELL COUNTY

C. J. Webster O. & G. Co.'s No. 2 McCroy, 750 ft. from S line, 150 ft. W of NE cor. of tract in John A. Neill Sur. ..... T.D. 2,276 ft.; P.B. to 600 ft. to make gas well.

EAGLE HILL POOL—DUVAL COUNTY

Al Buchanan's No. 3 Duval County Ranch Co., 330 ft. from S line, 2,310 ft. from E line of N½ of Sur. No. 206 ..... T.D. 1,481 ft.; set csg.

R. D. Kelley's No. 3 Foster, 330 ft. from W line, 1,436 ft. from N line of 50-ac. tract in Sur. 206 ..... Rigging up.

R. D. Kelley's No. 2 Foster, 1,650 ft. from E line of survey, and 990 ft. S of N line of S½ of Sur. No. 206 T.D. 1,484 ft.; comp. 150 bbls. dly.

Al Buchanan's No. 2-B Foster, 330 ft. from S and E lines of N 100 acres of W 200 acres of S½ of Sur. No. 206 ..... T.D. 560 ft.; drlg.

Shasta Oil Co.'s No. 1 Foster, 330 ft. from N line, 330 ft. from E line of S½ of Sur. No. 206 ..... T.D. 1,497 ft.; comp. 100 bbls. dly; part wtr.

Texas Co.'s No. 7-A Duval County Ranch Co., 990 ft. from E line, 330 ft. from S line of N½ N½ of Sur. No. 206 ..... Location; changed from 6-A to 7-A.

EAST COLE POOL—DUVAL COUNTY

Cole Pet. Co.'s No. 2 S. Benavides, 350 ft. from SE line, 300 ft. from SW line of Blk. 347 Hale Subd. of Arispe grant ..... T.D. 2,430 ft.; comp. 15,000,000 ft. gas.

Motes-Campbell's No. 1 Bruni, 150 ft. from NE and SE lines of Sec. 493, Myrtle E. Hale Subd., Mariano Arispe grant ..... T.D. 675 ft.; drlg.

IGNACIO POOL—DUVAL COUNTY

DeSoto O. & G. Co.'s No. 3 Wood-Welder, 3,120 ft. from W line 1,170 ft. from N line of Sur. No. 211.. Rigging up.

NORTH GOVERNMENT WELLS POOL—DUVAL COUNTY

Al Buchanan's No. 4 B. T. Ellison, 330 ft. from N and W lines of NE NW of Sur. No. 44 ..... T.D. 2,297 ft.; comp. 100 bbls. dly.

Humble O. & R. Co.'s No. 28 Hahl, 3,670 ft. from S line, 1,650 ft. from W line of E½ of Sur. 360 ..... T.D. 2,305 ft.; swabbing.

Humble O. & R. Co.'s No. 3 Duval County Ranch Co., 330 ft. from S line, 1,650 ft. from W line of NW of Sur. No. 362 ..... T.D. 2,297 ft.; abd.; dry.

Humble O. & R. Co.'s No. 27 C. W. Hahl, 1,650 ft. from S and E lines of E½ of Sur. No. 360 ..... T.D. 2,331 ft.; comp. 720 bbls. dly.

Magnolia Pet. Co.'s No. 14 Duval County Ranch Co., 1,650 ft. from E and S lines of Sur. No. 208 ..... T.D. 2,317 ft.; W.O.C.

Magnolia Pet. Co.'s No. 16 Duval County Ranch Co., 330 ft. from S and W lines of Sur. No. 208 ..... Derrick.

Magnolia Pet. Co.'s No. 12 Duval County Ranch Co., 2,310 ft. from E line, 990 ft. from S line of Sur. No. 208 ..... T.D. 2,328 ft.; comp. 120 bbls. dly.

Magnolia Pet. Co.'s No. 11 Duval County Ranch Co., 1,650 ft. from E line, 990 ft. from W line of Sur. No. 208 ..... T.D. 2,331 ft.; comp. 150 bbls. dly.

Magnolia Pet. Co.'s No. 13 Duval County Ranch Co., 2,970 ft. from E line, 990 ft. from S line of Sur. No. 208 ..... T.D. 2,329 ft.; comp. 200 bbls. dly.

Reynosa Oil Corp.'s No. 6-A Duval Ranch Co., 330 ft. from N and E lines of N½ of SW of Sur. No. 362.. T.D. 2,290 ft.; tested S.W. P.H 4 ft.

Sun Oil Co.'s No. 20 Weiderkehr, 2,310 ft. from N line, 990 ft. from E line of Sur. No. 361 ..... Rigging up.

Sun Oil Co.'s No. 21 Weiderkehr, 1,650 ft. from N line, 1,650 ft. from E line of Sur. No. 359 ..... T.D. 60 ft.; W.O.C.

Sun Oil Co.'s No. 22 Weiderkehr, 2,310 ft. from N line, 1,650 ft. from E line of Sur. No. 359 ..... T.D. 54 ft.; W.O.C.

Sun Oil Co.'s No. 16 Weiderkehr, 330 ft. from N line, 990 ft. from E line of Sur. No. 359 ..... T.D. 2,325 ft.; comp. 200 bbls. dly.

Sun Oil Co.'s No. 17 Weiderkehr, 990 ft. from N and E lines of Sur. No. 359 ..... T.D. 2,320 ft.; comp. 200 bbls. dly.

Sun Oil Co.'s No. 18 Weiderkehr, 2,970 ft. from N line, 330 ft. from E line of Sur. No. 361 ..... T.D. 2,235 ft.; comp. 15,000,000 ft. gas and 150 bbls. oil daily.

Sun Oil Co.'s No. 19 Weiderkehr, 1,650 ft. from N line, 990 ft. from E line of Sur. No. 359 ..... T.D. 2,297 ft.; set csg.

Texas Co.'s No. 7 W. C. Riggs, 990 ft. from S line, 150 ft. from W line of E½ of NW of Sur. No. 46.... T.D. 2,294 ft.; comp. 240 bbls. dly.

Texas Co.'s No. 1-B Wendt, center of E 70 acres of NW of Sur. No. 43 ..... T.D. 2,245 ft.; comp. 10,000,000 ft. gas daily.

Violet Oil Co.'s No. 2 M. Webb, 330 ft. from N line, 330 ft. from E line of Sur. No. 41 ..... Rigging up.

SOUTH GOVERNMENT WELLS POOL—DUVAL COUNTY

Bridwell's No. 2 C. W. Hahl, 660 ft. from S line, 200 ft. from W line of Sur. No. 360 ..... T.D. 2,319 ft.; testing.

Humble O. & R. Co.'s No. 15 Paul White, 2,600 ft. from E line, 300 ft. from N line of Sur. No. 58 .... T.D. 2,319 ft.; flowing into pit.

Humble O. & R. Co.'s No. 12 Paul White, 1,650 ft. from S and E lines of Sur. No. 249 ..... T.D. 2,283 ft.; flowing by heads, small well.

Rodney DeLange's No. 3 Lundell, 330 ft. from E line, 910 ft. from S line of SW¼ of Sur. No. 60 ..... T.D. 2,252 ft.; setting 5 3/16-in. inside 7-in. on account of leak.

SARNOSA POOL—DUVAL COUNTY

Wertheimer Oil Corp.'s No. 2 Hernendez, 658 ft. SE of No. 1, and 357 ft. NE of SW line of E¼ of Sur. No. 574 ..... T.D. 2,500 ft.; running jet.

S. R. C. POOL—DUVAL COUNTY

S. R. C. Oil Co.'s No. 10 Duval County Ranch Co., 100 ft. from S line, 1,153 ft. from E line of Sur. No. 295. T.D. 1,850 ft.; abd.

PALANGANO POOL—DUVAL COUNTY

J. W. Edwards' No. 1 Gravis, 1,670 ft. from NE line, 1,830 ft. from SE line of Sur. No. 2 ..... T.D. 3,200 ft.; drlg.

GOLIAD COUNTY

United Prod. Co.'s No. 3 Ray, 3,388 ft. from N line, 958 ft. from E line of Moore Sur. ..... T.D. 6,054 ft.; W.O. job; being P.B. to Pettus sand at 4,054 ft.; swabbing.

NEW BERLIN POOL—GUADALUPE COUNTY

J. A. Harper's No. 2 Rosenbrook, 660 ft. SW of No. 1...T.D. 701 ft.; standing.

JACOB POOL—McMULLEN COUNTY

Loma Oil Co.'s No. 18-A Jacobs, 660 ft. S of No. 11, in W. H. Jacobs Sur. No. 8 ..... Derrick.

Longhorn Oil Co.'s No. 3-A Lark, 450 ft. from N line, 150 ft. from W line of Blk. 14, of Subd. of Lark land in E. W. B. Scrugham Sur. ..... T.D. 1,030 ft.; C.O

Kennon & Stephenson's No. 1 Lark, 150 ft. from N and W lines of Blk. 15, subd. of Lark land in E. W. B. Scrugham Sur. ..... T.D. 1,023 ft.; set csg.; W.O.C.

AGUA DULCE POOL—NUECES COUNTY

Garland Clymore's No. 1 Ollie Purl ..... T.D. 4,858 ft.; est. 100 bbls. gasoline daily.

CUEVITAS POOL—STARR COUNTY

Mims, Hamill & Evans' No. 1 M. Guerra, 330 ft. from E line, 330 ft. from S line of Share M-10, in Las Cuevitas grant ..... T.D. 2,500 ft.; abd.

Sun Oil Co.'s No. 4-B Guerra, 2,640 ft. from SW line, 660 ft. from SE line of "B" Lease ..... T.D. 2,282 ft.; set csg.

Sun Oil Co.'s No. 1-D Guerra, 6,353 ft. from NE line, 2,300 ft. from SE line of La Sacatosa grant ..... Rigging up.

Sun Oil Co.'s No. 9-A Guerra, 4,620 ft. from NW line, 660 ft. from SW line of Share H-14-B, of Cuevitas grant ..... T.D. 2,262 ft.; set csg.; waiting on cement.

LOS OLMOS POOL—STARR COUNTY

Los Olmos O. & G. Co.'s No. 57 Kelsey Bass, 150 ft. from N line, 548 ft. from W line of SE SW Sec. 6, Porcions 75, 76 and 77 ..... T.D. 640 ft.; standing.

CAROLINA-TEXAS POOL—WEBB COUNTY

Carolina-Texas Oil & Gas Trust's No. 11 Benavides, 150 ft. from S line, 600 ft. from W line of Blk. 12 in Sur. No. 683 ..... T.D. 2,301 ft.; abd.; depth corrected.

LAUREL POOL—WEBB COUNTY

South Texas Prod. Co.'s No. 10 Laurel, 425 ft. from W line, 150 ft. from S line of Blk. 9, in Sur. No. 270.. T.D. 2,301 ft.; standing.

WEST COLE POOL—WEBB COUNTY

Cole Pet. Co.'s No. 20 Rosa V. Benavides, 1,361 ft. from E line, 160 ft. from S line of Blk. 3, Sur. No. 412.. T.D. 2,342 ft.; comp. 150 bbls. dly.

BYERSVILLE POOL—WILLIAMSON COUNTY

Fritz Fuch's No. 1 C. W. Johnson, 600 ft. from SE line, 700 ft. from NE line of tract in P. Cartwright Sur. ..... Drlg. 956 ft.; W.O.C.

ESCOBAS POOL—ZAPATA COUNTY

Texas Co.'s No. 25 Whitehead, 2,798 ft. from SE line, 20,442 ft. from SW line of Cerrito Blanco grant.... T.D. 2,012 ft.; drlg.

W. E. West and J. P. Perry's No. 1 Garcia, 1,200 ft. from NW line, 200 ft. from NE line of Share 3 of Comitas grant ..... T.D. 225 ft.; standing.

MARTINEZ POOL—ZAPATA COUNTY

W. R. Shankle and Wm. McGinley's No. 2 Manuel Trevino heirs, 330 ft. from W line, 150 ft. from S line of Blk. 15, Sur. No. 411 ..... Rigged up.

MIRANDO VALLEY POOL—ZAPATA COUNTY

Blair & Blankenship's No. 1 R. Hinnant, 450 ft. from S line, 300 ft. from W line of Blk. 16, Sur. No. 116.. T.D. 1,505 ft.; testing.

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Tulsa, Oklahoma

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Tulsa, Oklahoma

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